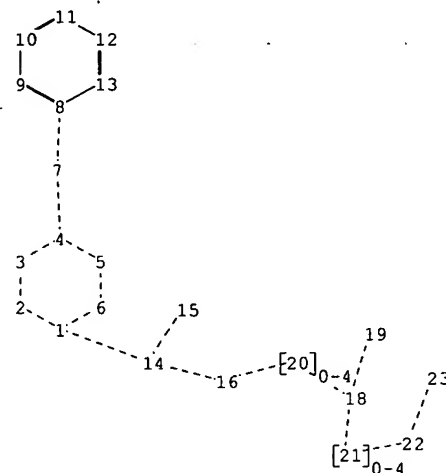
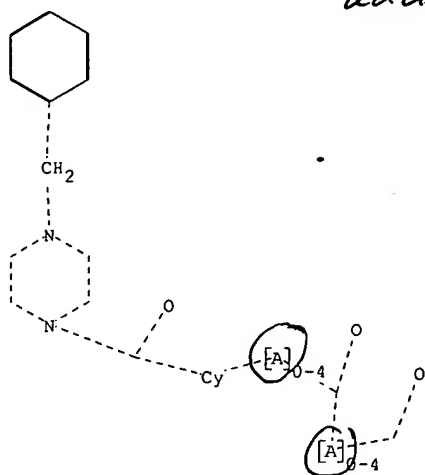


This structure is broader than structure L5  
and the result was to add 4  
additional C4Plus references.  
They are attached.



chain nodes :

7 14 15 16 18 19 22 23

ring nodes :

1 2 3 4 5 6 8 9 10 11 12 13

ring/chain nodes :

20 21

chain bonds :

1-14 4-7 7-8 14-15 14-16 16-20 18-19 18-20 18-21 21-22 22-23

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-13 9-10 10-11 11-12 12-13

exact/norm bonds :

1-2 1-6 1-14 2-3 3-4 4-5 4-7 5-6 7-8 14-15 14-16 16-20 18-19 18-20 18-21  
21-22 22-23

normalized bonds :

8-9 8-13 9-10 10-11 11-12 12-13

Connectivity :

14:3 E exact RC ring/chain 15:1 E exact RC ring/chain 18:3 E exact RC ring/chain  
19:1 E exact RC ring/chain 22:3 X maximum RC ring/chain 23:1 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:Atom 9:Atom 10:Atom 11:Atom  
12:Atom 13:Atom 14:CLASS 15:CLASS 16:Atom 18:CLASS 19:CLASS 20:CLASS 21:CLASS  
22:CLASS 23:CLASS

Generic attributes :

16:

Saturation : Unsaturated

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=> file caplus

FILE 'CAPLUS' ENTERED AT 09:16:05 ON 19 AUG 2005

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FILE COVERS 1907 - 19 Aug 2005 VOL 143 ISS 9

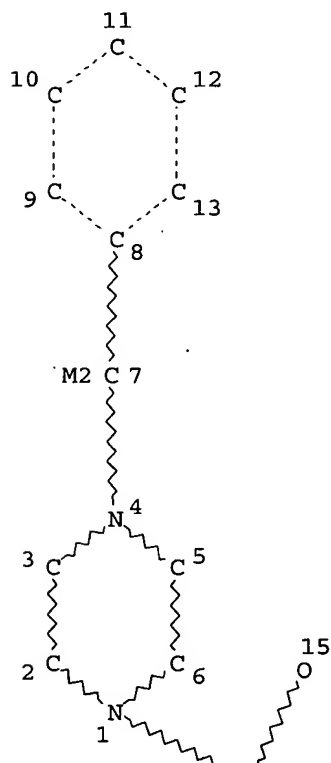
FILE LAST UPDATED: 18 Aug 2005 (20050818/ED)

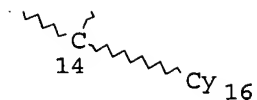
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d stat que L25

L1 STR





Page 2-A

## NODE ATTRIBUTES:

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NSPEC	IS	R	AT	11
NSPEC	IS	R	AT	12
NSPEC	IS	R	AT	13
NSPEC	IS	C	AT	14
NSPEC	IS	C	AT	15
NSPEC	IS	C	AT	16
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CONNECT	IS	E1	RC	AT 15
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GGCAT	IS	UNS	AT	16
DEFAULT	ECLEVEL	IS	LIMITED	

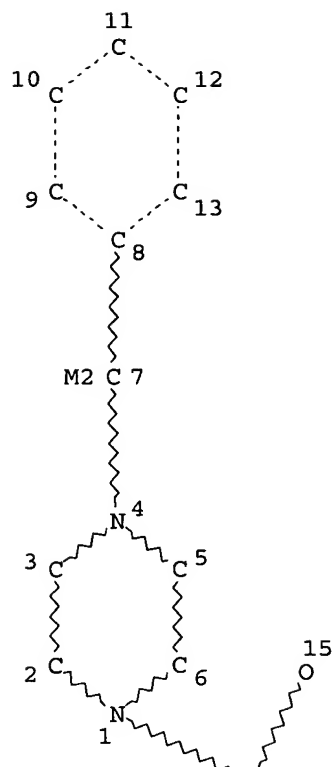
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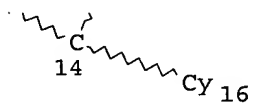
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L2 5033 SEA FILE=REGISTRY SSS FUL L1  
 L3 STR





Page 1-A



Page 2-A

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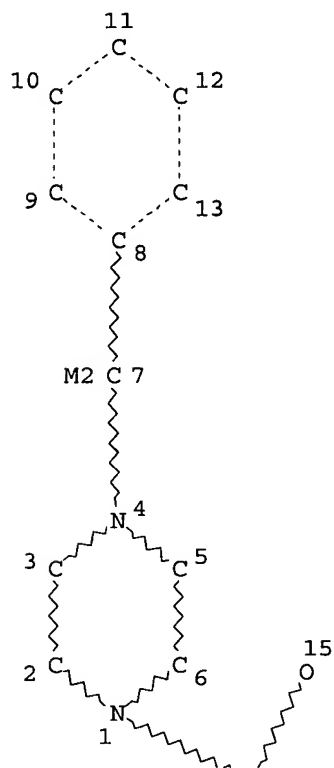
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NSPEC	IS	R	AT	6
NSPEC	IS	C	AT	7
NSPEC	IS	R	AT	8
NSPEC	IS	R	AT	9
NSPEC	IS	R	AT	10
NSPEC	IS	R	AT	11
NSPEC	IS	R	AT	12
NSPEC	IS	R	AT	13
NSPEC	IS	C	AT	14
NSPEC	IS	C	AT	15
NSPEC	IS	C	AT	16
CONNECT	IS	E3	RC	AT 14
CONNECT	IS	E1	RC	AT 15
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MLEVEL	IS	CLASS	AT	7 14 15

GGCAT IS UNS AT 16  
DEFAULT ECLEVEL IS LIMITED

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RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

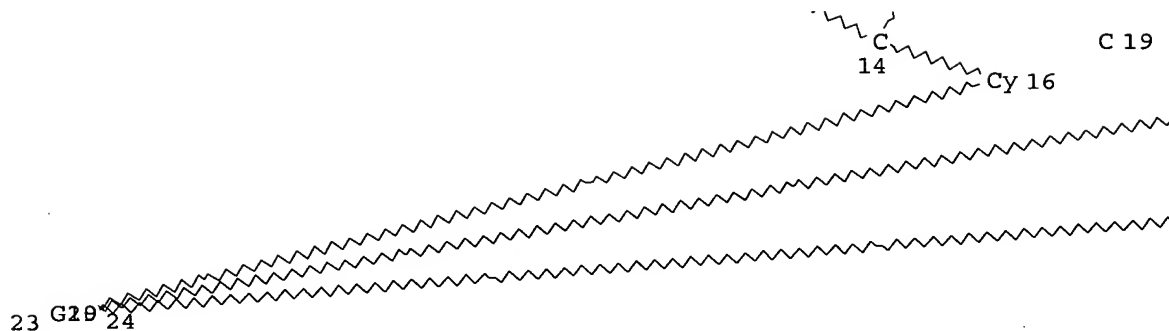
L4 ( 5033)SEA FILE=REGISTRY SSS FUL L3  
L5 STR



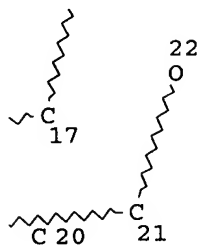
Page 1-A



Page 1-B



Page 2-A



Page 2-B

REP G19=(0-4) 20-17 20-21

REP G20=(0-4) 19-16 19-17

NODE ATTRIBUTES:

HCOUNT	IS	M2	AT	7
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NSPEC	IS	R	AT	2
NSPEC	IS	R	AT	3
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NSPEC	IS	R	AT	5
NSPEC	IS	R	AT	6
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NSPEC	IS	C	AT	22
NSPEC	IS	C	AT	23
NSPEC	IS	C	AT	24
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CONNECT	IS	X3	RC	AT 21
CONNECT	IS	E1	RC	AT 22
DEFAULT	MLEVEL	IS	ATOM	
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GGCAT	IS	UNS	AT	16
DEFAULT	ECLEVEL	IS	LIMITED	

GRAPH ATTRIBUTES:

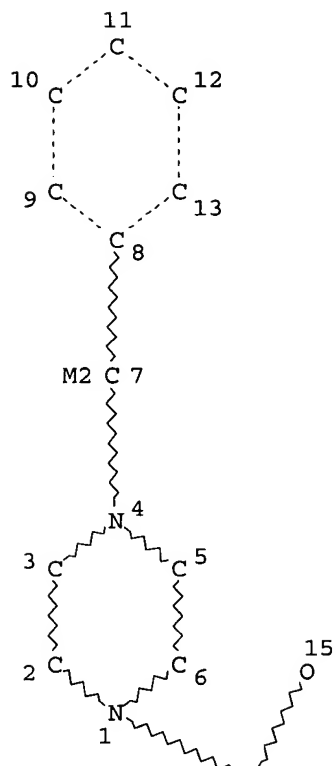
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 24

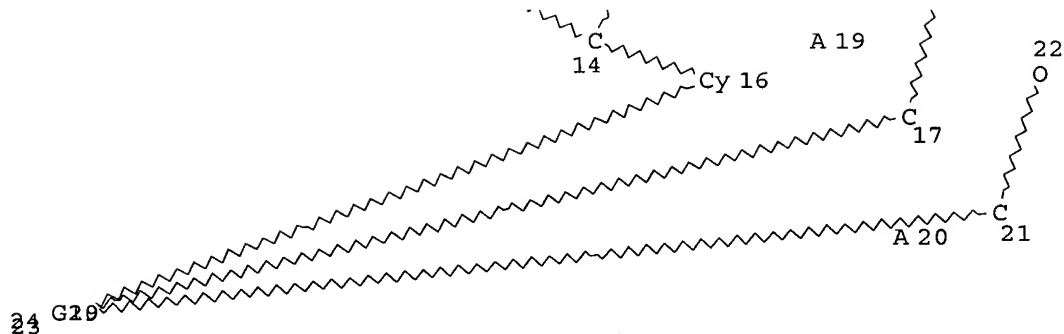
STEREO ATTRIBUTES: NONE

L6 203 SEA FILE=REGISTRY SUB=L4 SSS FUL L5

L9 STR



Page 1-A



Page 2-A

REP G19=(0-4) 20-17 20-21

REP G20=(0-4) 19-16 19-17

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NSPEC	IS R	AT	2
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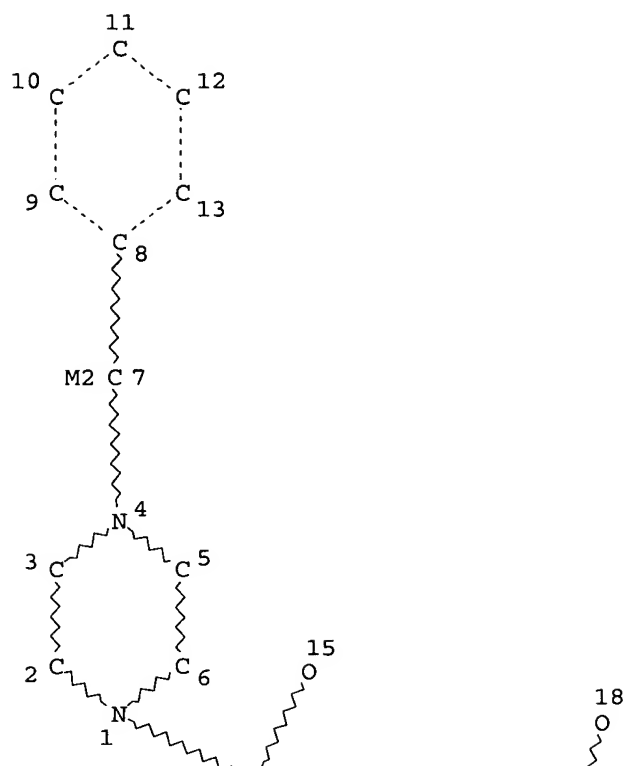
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NSPEC IS R AT 12  
NSPEC IS R AT 13  
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NSPEC IS C AT 18  
NSPEC IS RC AT 19  
NSPEC IS RC AT 20  
NSPEC IS C AT 21  
NSPEC IS C AT 22  
NSPEC IS C AT 23  
NSPEC IS C AT 24  
CONNECT IS E3 RC AT 14  
CONNECT IS E1 RC AT 15  
CONNECT IS E3 RC AT 17  
CONNECT IS E1 RC AT 18  
CONNECT IS X3 RC AT 21  
CONNECT IS E1 RC AT 22  
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MLEVEL IS CLASS AT 7 14 15 17 18 19 20 21 22  
GGCAT IS UNS AT 16  
DEFAULT ECLEVEL IS LIMITED

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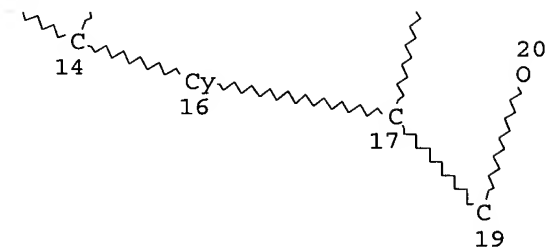
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NUMBER OF NODES IS 24

## STEREO ATTRIBUTES: NONE

L11 275 SEA FILE=REGISTRY SUB=L2 SSS FUL L9  
L12 17 SEA FILE=CAPLUS ABB=ON PLU=ON L11  
L14 STR



Page 1-A



Page 2-A

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NSPEC	IS	R	AT	2
NSPEC	IS	R	AT	3
NSPEC	IS	R	AT	4
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NSPEC	IS	R	AT	12
NSPEC	IS	R	AT	13
NSPEC	IS	C	AT	14
NSPEC	IS	C	AT	15

NSPEC IS C AT 16  
NSPEC IS C AT 17  
NSPEC IS C AT 18  
NSPEC IS C AT 19  
NSPEC IS C AT 20  
CONNECT IS E3 RC AT 14  
CONNECT IS E1 RC AT 15  
CONNECT IS E3 RC AT 17  
CONNECT IS E1 RC AT 18  
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DEFAULT MLEVEL IS ATOM  
MLEVEL IS CLASS AT 7 14 15 17 18 19 20  
GGCAT IS UNS AT 16  
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE

L18 203 SEA FILE=REGISTRY SUB=L2 SSS FUL L14  
L22 13 SEA FILE=CAPLUS ABB=ON PLU=ON L18  
L23 13 SEA FILE=CAPLUS ABB=ON PLU=ON L6  
L24 13 SEA FILE=CAPLUS ABB=ON PLU=ON L22 AND L23  
L25 4 SEA FILE=CAPLUS ABB=ON PLU=ON L12 NOT L24

=> d ibib abs hitstr L25 1-4

L25 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:991090 CAPLUS

DOCUMENT NUMBER: 142:134440

TITLE: A Library of Spirooxindoles Based on a Stereoselective  
Three-Component Coupling Reaction

AUTHOR(S): Lo, Michael M.-C.; Neumann, Christopher S.; Nagayama,  
Satoshi; Perlstein, Ethan O.; Schreiber, Stuart L.

CORPORATE SOURCE: Program in Chemical Biology, Broad Institute of  
Harvard and MIT and the Howard Hughes Medical  
Institute, Department of Chemistry and Chemical  
Biology, Harvard University, Cambridge, MA, 02138, USA

SOURCE: Journal of the American Chemical Society (2004),  
126(49), 16077-16086

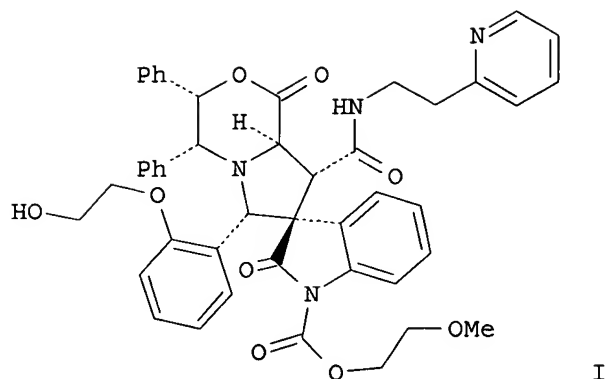
CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB A combinatorial library containing nonracemic polycyclic spirooxindoles such as I is prepared and tested for the ability of its members to enhance the inhibition of actin polymerization by latrunculin B; the key step in the preparation

of the combinatorial library is the stereoselective Lewis acid-catalyzed cycloaddn. of nonracemic oxazinones with alkylideneoxindoles and resin-bound aldehydes. The library is elaborated on solid phase using Sonogashira coupling (with or without concomitant deallylation of an allyl ester), amidation, and acylation reactions. The final library was analyzed by sampling individual macrobeads and by using binomial confidence limits; at least 82% of the library compds. are estimated to have been formed in >80% purity. The hydrophobicity of library members is determined. Of the library compds., 19 are enhancers of latrunculin B-mediated inhibition of actin polymerization as determined by the inhibition of yeast growth in

the presence of latrunculin B and members of the combinatorial library. E.g., I inhibits the growth of yeast with an EC<sub>50</sub> value of 550 nM.

IT 825648-06-4P

RL: CPN (Combinatorial preparation); PAC (Pharmacological activity); PRP (Properties); BIOL (Biological study); CMBI (Combinatorial study); PREP (Preparation)

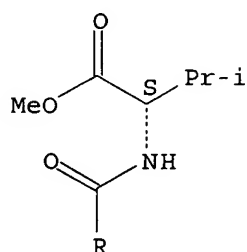
(combinatorial preparation of a library of nonracemic spirooxindoles active as enhancers of latrunculin B-mediated inhibition of actin polymerization using a stereoselective three-component coupling reaction as the key step)

RN 825648-06-4 CAPLUS

CN L-Valine, N-[[[(3S,3'S,4'R,6'S,8'R,8'aR)-8'-[[4-(1,3-benzodioxol-5-ylmethyl)-1-piperazinyl]carbonyl]-3',4',8',8'a-tetrahydro-6'-[3-(2-hydroxyethoxy)phenyl]-1',2-dioxo-3',4'-diphenylspiro[3H-indole-3,7'(6'H)-[1H]pyrrolo[2,1-c][1,4]oxazin]-1(2H)-yl]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

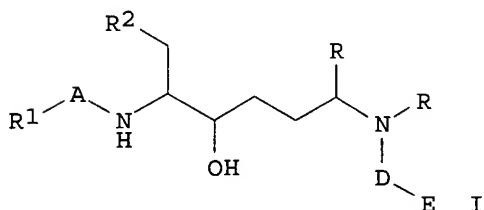




L25 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2003:334836 CAPLUS  
DOCUMENT NUMBER: 138:354240  
TITLE: Preparation of  $\alpha$ -hydroxyarylbutanamines as  
inhibitors of aspartyl protease  
INVENTOR(S): Or, Yat Sun; Wang, Guoqiang; Rougas, John; Mathews,

Jude Elizabeth; Muldoon, Kate Ryan; Boyd, Vincent  
 Alfred; Eckstein, Jens Werner; Riesinger, Steven Wayne  
 PATENT ASSIGNEE(S): Enanta Pharmaceuticals, Inc., USA  
 SOURCE: PCT Int. Appl., 98 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003034989	A2	20030501	WO 2002-US33324	20021018
WO 2003034989	A3	20031204		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003207934	A1	20031106	US 2001-7235	20011022
US 6696494	B2	20040224		
PRIORITY APPLN. INFO.:			US 2001-7235	A 20011022
OTHER SOURCE(S):	MARPAT 138:354240			
GI				



AB The invention relates to  $\alpha$ -hydroxybutanamine derivs. I [RCHNR is mono-, bi- or tricyclic aryl or heteroaryl that may be substituted; R1 is (un)substituted (oxa)alkyl, aryl, alkylaryl, or heterocyclyl; R2 is hydrocarbyl, substituted aryl, or heterocyclyl; A is CO, CS, NHCO, SO<sub>2</sub>, NHSO<sub>2</sub>, etc.; D is CO or NHCO; E is alkyl, (un)substituted heterocyclyl, or an amino group] and corresponding  $\beta,\gamma$ -unsatd. derivs. and their pharmaceutically-acceptable salts as inhibitors of aspartyl protease for use in treating diseases, particularly HIV. A scheme details a method starting from N-(tert-butoxycarbonyl)-L-phenylalanine for the production of a compound which is a subgenus of compds. of the invention.  
 (S,R)-2,6-Me<sub>2</sub>C<sub>6</sub>H<sub>3</sub>OCH<sub>2</sub>CONHCH(CH<sub>2</sub>Ph)CH(OH)CH<sub>2</sub>CH<sub>2</sub>C<sub>6</sub>H<sub>3</sub>(Me)CONHBu-t-2,6 showed IC<sub>50</sub> < 0.1  $\mu$ M for inhibition of HIV-1 protease.

IT 521066-12-6P, EP 000765  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

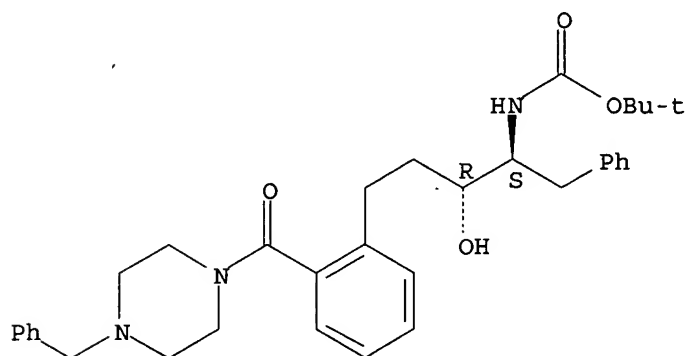
## (Uses)

(EP 000765; preparation of hydroxybutanamine aryl derivs as inhibitors of aspartyl protease)

RN 521066-12-6 CAPLUS

CN Carbamic acid, [(1S,2R)-2-hydroxy-1-(phenylmethyl)-4-[2-[[4-(phenylmethyl)-1-piperazinyl]carbonyl]phenyl]butyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L25 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2000:608731 CAPLUS

DOCUMENT NUMBER: 133:208185

TITLE: Solid-phase synthesis of isoquinoline derivatives and isoquinoline combinatorial libraries

INVENTOR(S): Lebl, Michael

PATENT ASSIGNEE(S): Trega Biosciences, Inc., USA

SOURCE: PCT Int. Appl., 260 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

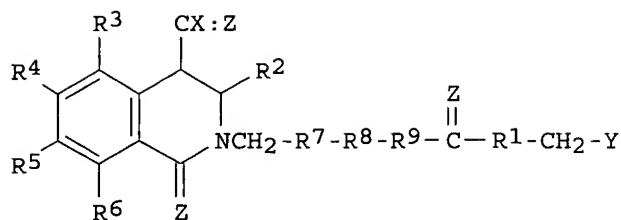
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000050406	A1	20000831	WO 2000-US4316	20000218
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6417195	B1	20020709	US 2000-506853	20000217
EP 1155001	A1	20011121	EP 2000-919327	20000218
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRIORITY APPLN. INFO.:			US 1999-255396	A 19990222
			US 2000-506853	A 20000217
			US 1999-198239P	P 19990222
			WO 2000-US4316	W 20000218

OTHER SOURCE(S): MARPAT 133:208185

GI



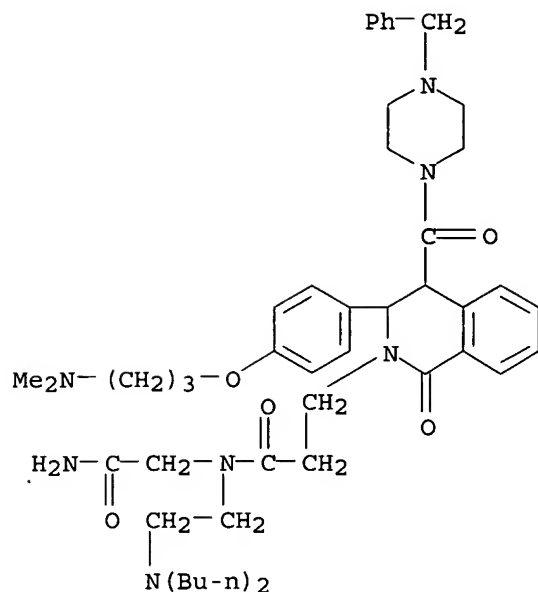
AB Solid-phase synthesis of isoquinolines I [R1 = (un)substituted 1,4-piperazinediyl, imino; R2 = H, (un)substituted alkyl, alkenyl, alkynyl, Ph, naphthyl, cycloalkyl, phenylalkyl, cycloalkenyl, phenylalkyl, heterocyclyl; R3-R6 = H, halo, OH, protected hydroxy, cyano, nitro, alkyl, etc.; R7, R9 = null, (un)substituted alkylene; R8 = null, (un)substituted alkylene, alkenylene, alkynylene, cycloalkylene, cycloalkenylene, phenylene, naphthylene, heterocyclene; X = OH, protected carboxy, (un)protected amino, substituted amino, an amino acid, substituted anilino, amino-substituted heterocyclyl; Y = CO<sub>2</sub>H, CH<sub>2</sub>OH, SH, CH<sub>2</sub>NHR<sub>12</sub>, CONHR<sub>12</sub>, CH<sub>2</sub>NHR<sub>12</sub>, where R<sub>12</sub> is H, (un)substituted alkyl, a functionalized resin; Z = O or H<sub>2</sub>] or their salts as well as libraries of isoquinolines is described. Thus, condensation on a TentaGel resin of protected glycine, PhCHO, and homophthalic anhydride was used to prepare trans-N-(2-acetamidoyl)-3-phenyl-4-carboxy-3,4-dihydro-1(2H)-isoquinoline. A library of isoquinoline amines was prepared and assayed for antimicrobial activity.

IT **289896-88-4P 289896-93-1P**

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(solid-phase synthesis of isoquinoline derivs. and isoquinoline combinatorial libraries)

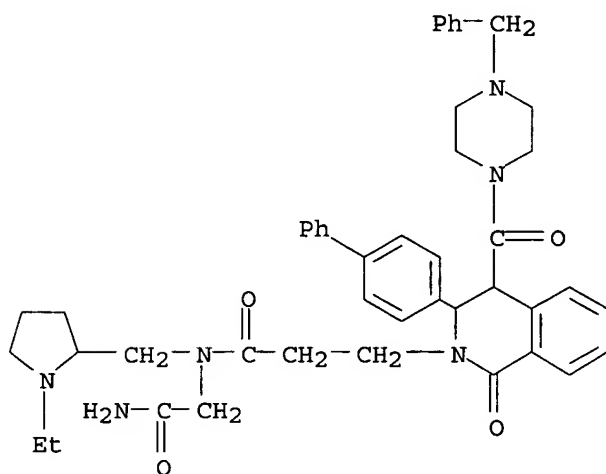
RN 289896-88-4 CAPLUS

CN 2(1H)-Isoquinolinepropanamide, N-(2-amino-2-oxoethyl)-N-[2-(dibutylamino)ethyl]-3-[4-[3-(dimethylamino)propoxy]phenyl]-3,4-dihydro-1-oxo-4-[[4-(phenylmethyl)-1-piperazinyl]carbonyl]- (9CI) (CA INDEX NAME)



RN 289896-93-1 CAPLUS

CN 2(1H)-Isoquinolinepropanamide, N-(2-amino-2-oxoethyl)-3-[1,1'-biphenyl]-4-yl-N-[(1-ethyl-2-pyrrolidinyl)methyl]-3,4-dihydro-1-oxo-4-[[4-(phenylmethyl)-1-piperazinyl]carbonyl]- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L25 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 1984:407637 CAPLUS  
 DOCUMENT NUMBER: 101:7637  
 TITLE: Amido N-substituted bleomycins  
 PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 24 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent

LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 58135899	A2	19830812	JP 1982-17072	19820205
JP 01045480	B4	19891003		
PRIORITY APPLN. INFO.: GI			JP 1982-17072	19820205

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB About 63 bleomycin derivs. I [R,R1 = (amino)(cyclo)alkylamino] were prepared via hydrolysis of bleomycin [I, R,R1 = (substituted)amino] and amidation of the resulting acids (I, R,R1 = OH) with amines. Thus, 10 g bleomycin B2 [I, R = NH<sub>2</sub>, R1 = NH(CH<sub>2</sub>)<sub>4</sub>NHC(NH<sub>2</sub>):NH] was treated with bovine liver homogenate in a H<sub>3</sub>PO<sub>4</sub> buffer solution and then with 2.4 equivalent Cu(OAc)<sub>2</sub> to give 8.5 g Cu-chelated deamidobleomycin B2 [I, R = OH, R1 = NH(CH<sub>2</sub>)<sub>4</sub>NHC(NH<sub>2</sub>):NH], which (1.77 g) in DMF containing 1-hydroxybenzotriazole and dicyclohexylcarbodiimide was treated with 840 mg (S)-H<sub>2</sub>N(CH<sub>2</sub>)<sub>3</sub>NHCHMePh.HCl at room temperature for 80 h to give 880 mg Cu-chelated I [R = NH(CH<sub>2</sub>)<sub>3</sub>NHCHPhMe-(S), R1 = NH(CH<sub>2</sub>)<sub>4</sub>NHC(NH<sub>2</sub>):NH] (II), Treatment of which with Amberlite XAD-2 gave 790 mg the de-chelated II. The enzymic hydrolysis of Cu-chelated II followed by treatment of the resulting I [R = NH(CH<sub>2</sub>)<sub>3</sub>NHCHPhMe-(S), R1 = OH] with the amine QH gave 980 mg chelated amido-N1,N39-disubstituted bleomycin B2 [I, R = NH(CH<sub>2</sub>)<sub>3</sub>NHCHPhMe-(S), R1 = Q] (III), which was de-chelated via Amberlite XAD and HCl treatment to give 92% III. HCl. The un-chelated amido-N1,N39-disubstituted bleomycins inhibited the growth of cultured HeLa S3 cells by 50% at 0.10-4 µg/mL concns.

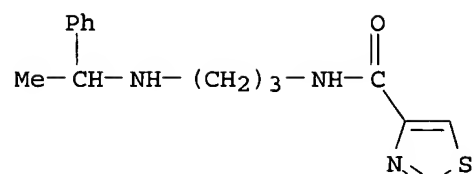
IT 90076-15-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and de-chelation of)

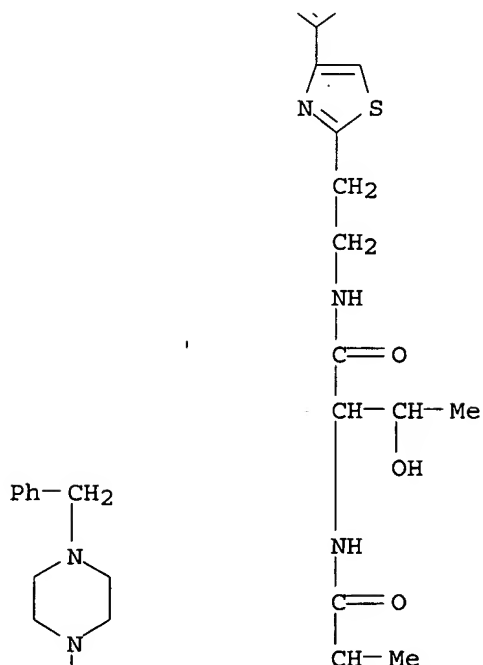
RN 90076-15-6 CAPLUS

CN Copper(1+), [39-deamino-N1-[3-[(1-phenylethyl)amino]propyl]-39-[4-(phenylmethyl)-1-piperazinyl]bleomycinamidato]-, stereoisomer (9CI) (CA INDEX NAME)

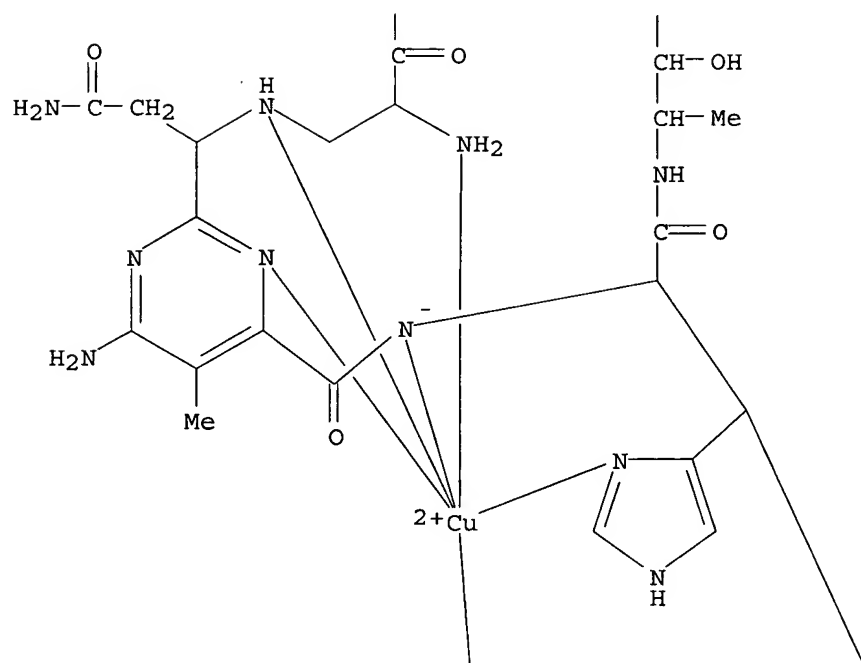
PAGE 1-A



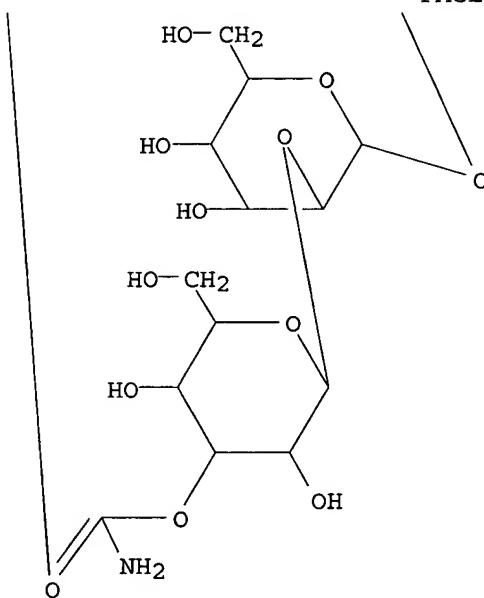
PAGE 2-A



PAGE 3-A



PAGE 4-A





# No hits in BEILSTEIN

Habte 10\_757023

08/19/2005

=> file beilstein

FILE 'BEILSTEIN' ENTERED AT 09:18:58 ON 19 AUG 2005

COPYRIGHT (c) 2005 Beilstein-Institut zur Foerderung der Chemischen Wissenschaften  
licensed to Beilstein GmbH and MDL Information Systems GmbH

FILE RELOADED ON OCTOBER 20, 2002

FILE LAST UPDATED ON JUNE 29, 2005

FILE COVERS 1771 TO 2005.

\*\*\* FILE CONTAINS 9,271,550 SUBSTANCES \*\*\*

>>>PLEASE NOTE: Reaction Data and substance data are stored in  
separate documents and can not be searched together in one query.  
Reaction data for BEILSTEIN compounds may be displayed  
immediately with the display codes PRE (preparations) and REA  
(reactions). A substance answer set retrieved after the search  
for a chemical name, a compounds with available reaction  
information by combining with PRE/FA, REA/FA or more generally  
with RX/FA. The BEILSTEIN Registry Number (BRN) is the link  
between a BEILSTEIN compound and belonging reactions. For mo  
detailed reaction searches BRNs can be searched as reaction  
partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

\*\*\*\*\*  
\* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. \*  
\* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE \*  
\* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE \*  
\* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. \*  
\* FOR PRICE INFORMATION SEE HELP COST \*  
\*\*\*\*\*

## NEW

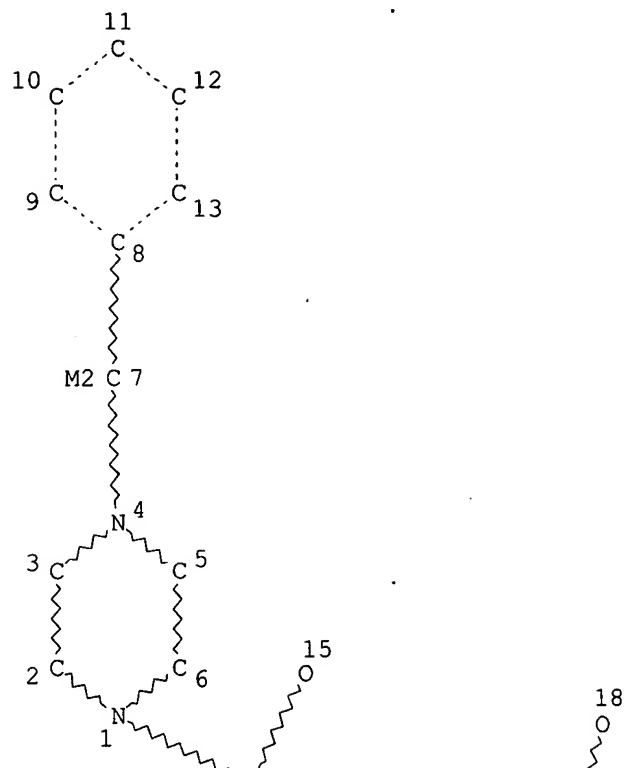
\* PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE  
SEARCHED, SELECTED AND TRANSFERRED.  
\* NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES,  
ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A  
COMPOUND AT A GLANCE.

=> d stat que L15

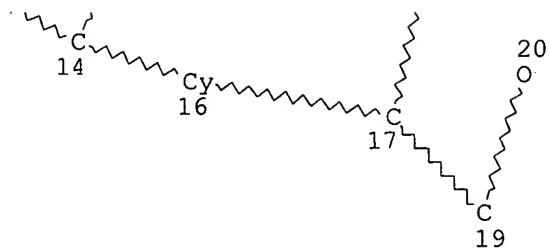
L14 STR

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Page 1-A



Page 2-A

## NODE ATTRIBUTES:

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NSPEC	IS R	AT	2
NSPEC	IS R	AT	3
NSPEC	IS R	AT	4
NSPEC	IS R	AT	5
NSPEC	IS R	AT	6
NSPEC	IS C	AT	7
NSPEC	IS R	AT	8
NSPEC	IS R	AT	9
NSPEC	IS R	AT	10
NSPEC	IS R	AT	11
NSPEC	IS R	AT	12
NSPEC	IS R	AT	13
NSPEC	IS C	AT	14
NSPEC	IS C	AT	15

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NSPEC IS C AT 16  
NSPEC IS C AT 17  
NSPEC IS C AT 18  
NSPEC IS C AT 19  
NSPEC IS C AT 20  
CONNECT IS E3 RC AT 14  
CONNECT IS E1 RC AT 15  
CONNECT IS E3 RC AT 17  
CONNECT IS E1 RC AT 18  
CONNECT IS X3 RC AT 19  
CONNECT IS E1 RC AT 20  
DEFAULT MLEVEL IS ATOM  
MLEVEL IS CLASS AT 7 14 15 17 18 19 20  
GGCAT IS UNS AT 16  
DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 20

## STEREO ATTRIBUTES: NONE

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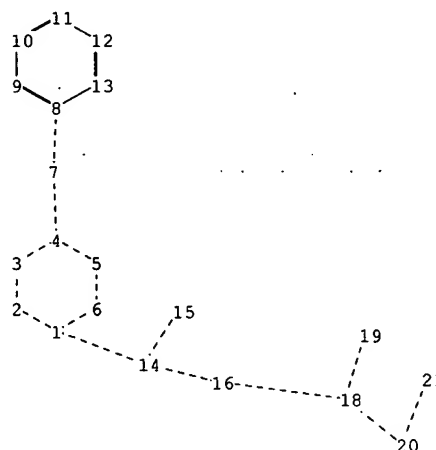
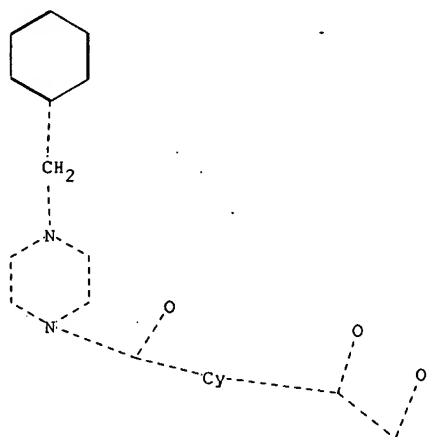
100.0% PROCESSED 317 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.04

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chain nodes :

7 14 15 16 18 19 20 21

ring nodes :

1 2 3 4 5 6 8 9 10 11 12 13

chain bonds :

1-14 4-7 7-8 14-15 14-16 16-18 18-19 18-20 20-21

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-13 9-10 10-11 11-12 12-13

exact/norm bonds :

1-2 1-6 1-14 2-3 3-4 4-5 4-7 5-6 7-8 14-15 14-16 16-18 18-19 18-20 20-21

normalized bonds :

8-9 8-13 9-10 10-11 11-12 12-13

Connectivity :

14:3 E exact RC ring/chain 15:1 E exact RC ring/chain 18:3 E exact RC ring/chain  
19:1 E exact RC ring/chain 20:3 X maximum RC ring/chain 21:1 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:Atom 9:Atom 10:Atom 11:Atom  
12:Atom 13:Atom 14:CLASS 15:CLASS 16:Atom 18:CLASS 19:CLASS 20:CLASS 21:CLASS

Generic attributes :

16:

Saturation : Unsaturated

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No hits in MEDLINE, EMBASE or BIOSIS.

Habte 10\_757023

08/19/2005

=> file registry

FILE 'REGISTRY' ENTERED AT 09:17:30 ON 19 AUG 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 18 AUG 2005 HIGHEST RN 860995-12-6

DICTIONARY FILE UPDATES: 18 AUG 2005 HIGHEST RN 860995-12-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

```
*****
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*
*****
```

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> file medline

FILE 'MEDLINE' ENTERED AT 09:17:35 ON 19 AUG 2005

FILE LAST UPDATED: 18 AUG 2005 (20050818/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>

[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> file embase

FILE 'EMBASE' ENTERED AT 09:17:39 ON 19 AUG 2005

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FILE COVERS 1974 TO 18 Aug 2005 (20050818/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> file biosis

FILE 'BIOSIS' ENTERED AT 09:17:43 ON 19 AUG 2005

Copyright (c) 2005 The Thomson Corporation

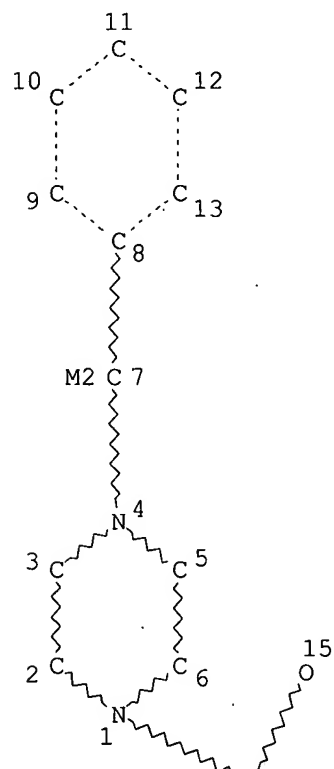
FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 17 August 2005 (20050817/ED)

FILE RELOADED: 19 October 2003.

=> d stat que L13  
L1 STR



Page 1-A

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Page 2-A

## NODE ATTRIBUTES:

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NSPEC	IS	R	AT	2
NSPEC	IS	R	AT	3
NSPEC	IS	R	AT	4
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NSPEC	IS	R	AT	6
NSPEC	IS	C	AT	7
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NSPEC	IS	C	AT	15
NSPEC	IS	C	AT	16
CONNECT	IS	E3	RC	AT 14
CONNECT	IS	E1	RC	AT 15
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GGCAT	IS	UNS	AT	16
DEFAULT ECLEVEL IS LIMITED				

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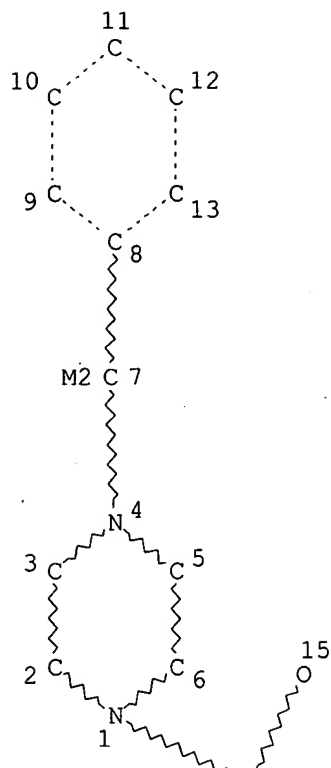
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NUMBER OF NODES IS 16

## STEREO ATTRIBUTES: NONE

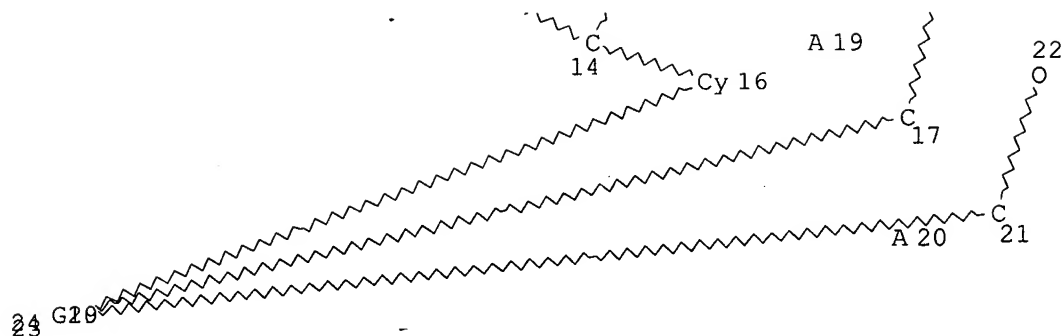
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L9 STR

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Page 1-A



Page 2-A

REP G19=(0-4) 20-17 20-21

REP G20=(0-4) 19-16 19-17

NODE ATTRIBUTES:

HCOUNT	IS M2	AT	7
NSPEC	IS R	AT	1
NSPEC	IS R	AT	2
NSPEC	IS R	AT	3
NSPEC	IS R	AT	4
NSPEC	IS R	AT	5
NSPEC	IS R	AT	6
NSPEC	IS C	AT	7
NSPEC	IS R	AT	8
NSPEC	IS R	AT	9
NSPEC	IS R	AT	10

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NSPEC IS R AT 11  
NSPEC IS R AT 12  
NSPEC IS R AT 13  
NSPEC IS C AT 14  
NSPEC IS C AT 15  
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NSPEC IS C AT 17  
NSPEC IS C AT 18  
NSPEC IS RC AT 19  
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CONNECT IS E3 RC AT 14  
CONNECT IS E1 RC AT 15  
CONNECT IS E3 RC AT 17  
CONNECT IS E1 RC AT 18  
CONNECT IS X3 RC AT 21  
CONNECT IS E1 RC AT 22  
DEFAULT MLEVEL IS ATOM  
MLEVEL IS CLASS AT 7 14 15 17 18 19 20 21 22  
GGCAT IS UNS AT 16  
DEFAULT ECLEVEL IS LIMITED

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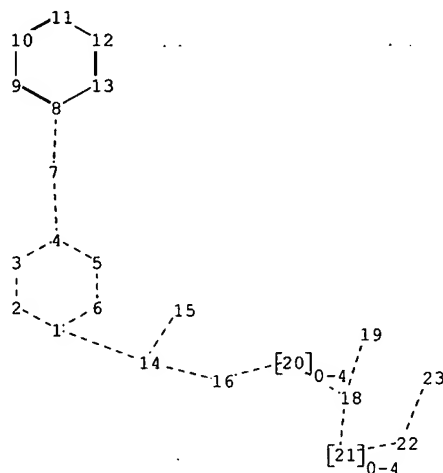
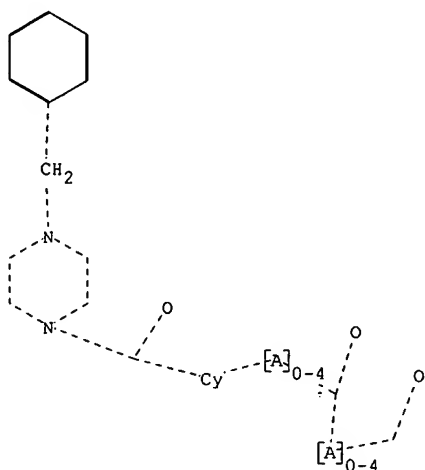
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 24

## STEREO ATTRIBUTES: NONE

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L13 0 SEA L11

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chain nodes :

7 14 15 16 18 19 22 23

ring nodes :

1 2 3 4 5 6 8 9 10 11 12 13

ring/chain nodes :

20 21

chain bonds :

1-14 4-7 7-8 14-15 14-16 16-20 18-19 18-20 18-21 21-22 22-23

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-13 9-10 10-11 11-12 12-13

exact/norm bonds :

1-2 1-6 1-14 2-3 3-4 4-5 4-7 5-6 7-8 14-15 14-16 16-20 18-19 18-20 18-21  
21-22 22-23

normalized bonds :

8-9 8-13 9-10 10-11 11-12 12-13

Connectivity :

14:3 E exact RC ring/chain 15:1 E exact RC ring/chain 18:3 E exact RC ring/chain  
19:1 E exact RC ring/chain 22:3 X maximum RC ring/chain 23:1 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:Atom 9:Atom 10:Atom 11:Atom  
12:Atom 13:Atom 14:CLASS 15:CLASS 16:Atom 18:CLASS 19:CLASS 20:CLASS 21:CLASS  
22:CLASS 23:CLASS

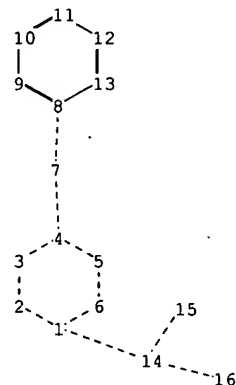
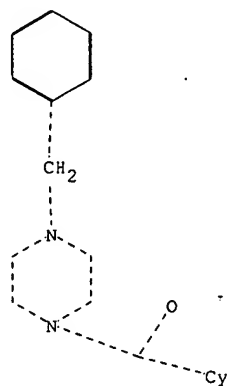
Generic attributes :

16:

Saturation : Unsaturated

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chain nodes :

7 14 15 16

ring nodes :

1 2 3 4 5 6 8 9 10 11 12 13

chain bonds :

1-14 4-7 7-8 14-15 14-16

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-13 9-10 10-11 11-12 12-13

exact/norm bonds :

1-2 1-6 1-14 2-3 3-4 4-5 4-7 5-6 7-8 14-15 14-16

normalized bonds :

8-9 8-13 9-10 10-11 11-12 12-13

Connectivity :

14:3 E exact RC ring/chain 15:1 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:Atom 9:Atom 10:Atom 11:Atom  
12:Atom 13:Atom 14:CLASS 15:CLASS 16:Atom

Generic attributes :

16:

Saturation : Unsaturated

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(FILE 'HOME' ENTERED AT 08:43:13 ON 19 AUG 2005)

FILE 'REGISTRY' ENTERED AT 08:43:30 ON 19 AUG 2005  
ACT HAB023STRA/A

L1 STR  
L2 5033 SEA SSS FUL L1  
-----  
ACT HAB023STRB/A  
-----

L3 STR  
L4 ( 5033)SEA SSS FUL L3  
L5 STR  
L6 203 SEA SUB=L4 SSS FUL L5  
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FILE 'CAPLUS' ENTERED AT 08:44:55 ON 19 AUG 2005  
ACT HAB023APP/A

L7 1 SEA ABB=ON PLU=ON US2004-757023/AP  
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FILE 'REGISTRY' ENTERED AT 08:45:21 ON 19 AUG 2005  
ACT HAB023RNS/A

L8 34 SEA ABB=ON PLU=ON (106-55-8/BI OR 124-40-3/BI OR 130182-29-5/  
BI OR 136117-69-6/BI OR 165245-96-5/BI OR 183951-17-9/BI OR  
2032-35-1/BI OR 21705-40-8/BI OR 309915-22-8/BI OR 309915-23-9/  
BI OR 3167-49-5/BI OR 352-11-4/BI OR 36052-24-1/BI OR 436848-15  
-6/BI OR 436848-16-7/BI OR 436848-17-8/BI OR 436848-18-9/BI OR  
436848-19-0/BI OR 436848-20-3/BI OR 436848-21-4/BI OR 436848-22  
-5/BI OR 436848-23-6/BI OR 436848-24-7/BI OR 436848-25-8/BI OR  
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63909-58-0/BI OR 7210-76-6/BI OR 79-37-8/BI OR 79099-07-3/BI  
OR 92822-02-1/BI OR 92822-03-2/BI)  
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L9 STRUCTURE UPLOADED  
L10 17 SEA SUB=L2 SSS SAM L9  
D SCA  
L11 275 SEA SUB=L2 SSS FUL L9  
SAVE TEMP L11 HAB023STRC/A

FILE 'CAPLUS' ENTERED AT 08:52:16 ON 19 AUG 2005  
L12 17 SEA ABB=ON PLU=ON L11

FILE 'MEDLINE, EMBASE, BIOSIS' ENTERED AT 08:53:16 ON 19 AUG 2005  
L13 0 SEA ABB=ON PLU=ON L11

FILE 'BEILSTEIN' ENTERED AT 08:53:35 ON 19 AUG 2005

FILE 'STNGUIDE' ENTERED AT 08:54:25 ON 19 AUG 2005

FILE 'BEILSTEIN' ENTERED AT 08:56:16 ON 19 AUG 2005  
L14 STRUCTURE UPLOADED  
L15 0 SEA SSS FUL L14

FILE 'CAPLUS' ENTERED AT 08:58:02 ON 19 AUG 2005

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S L14

FILE 'REGISTRY' ENTERED AT 08:58:22 ON 19 AUG 2005  
L\*\*\* DEL 13 S L14 SSS SAM SUB=L2

FILE 'CAPLUS' ENTERED AT 08:58:23 ON 19 AUG 2005  
L\*\*\* DEL 8 S L16 SSS SUBSET=L2 SAM

FILE 'REGISTRY' ENTERED AT 08:58:50 ON 19 AUG 2005  
L16 13 SEA SUB=L2 SSS SAM L14  
D SCA

FILE 'CAPLUS' ENTERED AT 09:01:29 ON 19 AUG 2005  
L17 8 SEA ABB=ON PLU=ON L16

FILE 'REGISTRY' ENTERED AT 09:02:56 ON 19 AUG 2005  
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L19 0 SEA ABB=ON PLU=ON L6 NOT L18  
L20 203 SEA ABB=ON PLU=ON L6 AND L18  
SAVE TEMP L18 HAB023STRD/A

FILE 'CAPLUS' ENTERED AT 09:08:33 ON 19 AUG 2005  
L21 13 SEA ABB=ON PLU=ON L20  
L22 13 SEA ABB=ON PLU=ON L18  
L23 13 SEA ABB=ON PLU=ON L6  
L24 13 SEA ABB=ON PLU=ON L22 AND L23  
L25 4 SEA ABB=ON PLU=ON L12 NOT L24

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FILE 'CAPLUS' ENTERED AT 09:13:16 ON 19 AUG 2005  
D STAT QUE L24  
D IBIB ABS HITSTR L24 1-13

FILE 'REGISTRY' ENTERED AT 09:16:02 ON 19 AUG 2005

FILE 'CAPLUS' ENTERED AT 09:16:05 ON 19 AUG 2005  
D STAT QUE L25  
D IBIB ABS HITSTR L25 1-4

FILE 'REGISTRY' ENTERED AT 09:17:30 ON 19 AUG 2005

FILE 'MEDLINE' ENTERED AT 09:17:35 ON 19 AUG 2005

FILE 'EMBASE' ENTERED AT 09:17:39 ON 19 AUG 2005

FILE 'BIOSIS' ENTERED AT 09:17:43 ON 19 AUG 2005  
D STAT QUE L13

FILE 'BEILSTEIN' ENTERED AT 09:18:58 ON 19 AUG 2005  
D STAT QUE L15

FILE 'STNGUIDE' ENTERED AT 09:20:12 ON 19 AUG 2005  
D COST

FILE 'MARPAT' ENTERED AT 09:53:30 ON 19 AUG 2005  
L26 2 SEA SSS SAM L14  
L27 51 SEA SSS FUL L14

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L28 FILE 'CAPLUS' ENTERED AT 09:58:09 ON 19 AUG 2005  
40 SEA ABB=ON PLU=ON L27 NOT L12  
D IBIB ABS HITSTR L28 1

L29 FILE 'MARPAT' ENTERED AT 10:02:43 ON 19 AUG 2005  
40 SEA ABB=ON PLU=ON L27 NOT L12

FILE 'MARPAT' ENTERED AT 10:05:12 ON 19 AUG 2005  
D STAT QUE L29  
D IBIB ABS HIT L29 1-40

FILE 'STNGUIDE' ENTERED AT 10:10:22 ON 19 AUG 2005

FILE HOME

FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 18 AUG 2005 HIGHEST RN 860995-12-6  
DICTIONARY FILE UPDATES: 18 AUG 2005 HIGHEST RN 860995-12-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

\*\*\*\*\*  
\*  
\* The CA roles and document type information have been removed from \*  
\* the IDE default display format and the ED field has been added, \*  
\* effective March 20, 2005. A new display format, IDERL, is now \*  
\* available and contains the CA role and document type information. \*  
\*  
\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

FILE CAPLUS

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FILE COVERS 1907 - 19 Aug 2005 VOL 143 ISS 9  
FILE LAST UPDATED: 18 Aug 2005 (20050818/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE MEDLINE

FILE LAST UPDATED: 18 AUG 2005 (20050818/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow prompt (=>). See also:

<http://www.nlm.nih.gov/mesh/>  
[http://www.nlm.nih.gov/pubs/techbull/nd04/nd04\\_mesh.html](http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html)

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE EMBASE

FILE COVERS 1974 TO 18 Aug 2005 (20050818/ED)

EMBASE has been reloaded. Enter HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BIOSIS

FILE COVERS 1969 TO DATE.

CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT  
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 17 August 2005 (20050817/ED)

FILE RELOADED: 19 October 2003.

FILE BEILSTEIN

FILE RELOADED ON OCTOBER 20, 2002

FILE LAST UPDATED ON JUNE 29, 2005

FILE COVERS 1771 TO 2005.

**FILE CONTAINS 9,271,550 SUBSTANCES**

>>>PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query. Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link

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between a BEILSTEIN compound and belonging reactions. For more detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

\*\*\*\*\*  
\* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST. \*  
\* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE \*  
\* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE \*  
\* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS. \*  
\* FOR PRICE INFORMATION SEE HELP COST \*  
\*\*\*\*\*

NEW

\* PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.  
\* NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.

FILE STNGUIDE

FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Aug 12, 2005 (20050812/UP).

FILE MARPAT

FILE CONTENT: 1988-PRESENT (VOL 143 ISS 06) (20050805/ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES (COVERAGE TO THESE DATES IS NOT COMPLETE):

US 6894191 17 MAY 2005  
DE 10349972 25 MAY 2005  
EP 1535908 01 JUN 2005  
JP 2005116601 28 APR 2005  
WO 2005054245 16 JUN 2005

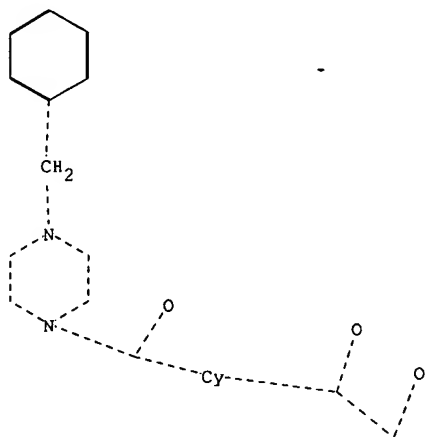
Expanded G-group definition display now available..

New CAS Information Use Policies, enter HELP USAGETERMS for details.

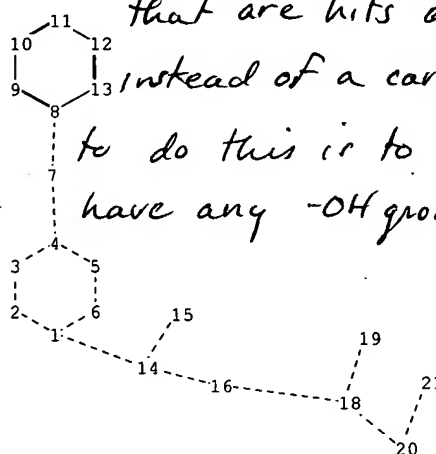
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MARPAT results are based on this structure. The aspects of the structure that are hits are bolded. You may want to ignore references that are hits due to an -OH group instead of a carbonyl. The easiest way to do this is to ignore references that have any -OH group in bold.



chain nodes :

7 14 15 16 18 19 20 21

ring nodes :

1 2 3 4 5 6 8 9 10 11 12 13

chain bonds :

1-14 4-7 7-8 14-15 14-16 16-18 18-19 18-20 20-21

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-13 9-10 10-11 11-12 12-13

exact/norm bonds :

1-2 1-6 1-14 2-3 3-4 4-5 4-7 5-6 7-8 14-15 14-16 16-18 18-19 18-20 20-21

normalized bonds :

8-9 8-13 9-10 10-11 11-12 12-13

Connectivity :

14:3 E exact RC ring/chain 15:1 E exact RC ring/chain 18:3 E exact RC ring/chain  
19:1 E exact RC ring/chain 20:3 X maximum RC ring/chain 21:1 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:Atom 9:Atom 10:Atom 11:Atom  
12:Atom 13:Atom 14:CLASS 15:CLASS 16:Atom 18:CLASS 19:CLASS 20:CLASS 21:CLASS

Generic attributes :

16:

Saturation : Unsaturated

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> file marpat

FILE 'MARPAT' ENTERED AT 10:05:12 ON 19 AUG 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE CONTENT: 1988-PRESENT (VOL 143 ISS 06) (20050805/ED)

MOST RECENT CITATIONS FOR PATENTS FROM FIVE MAJOR ISSUING AGENCIES  
(COVERAGE TO THESE DATES IS NOT COMPLETE):

US 6894191 17 MAY 2005

DE 10349972 25 MAY 2005

EP 1535908 01 JUN 2005

JP 2005116601 28 APR 2005

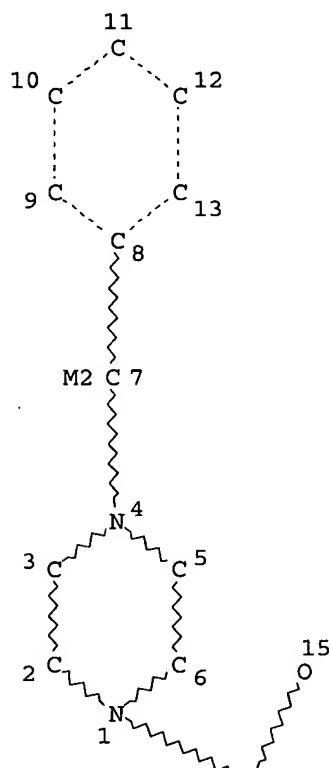
WO 2005054245 16 JUN 2005

Expanded G-group definition display now available.

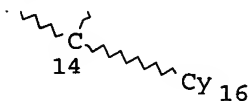
New CAS Information Use Policies, enter HELP USAGETERMS for details.

=> d stat que L29

L1 STR



Page 1-A



Page 2-A

## NODE ATTRIBUTES:

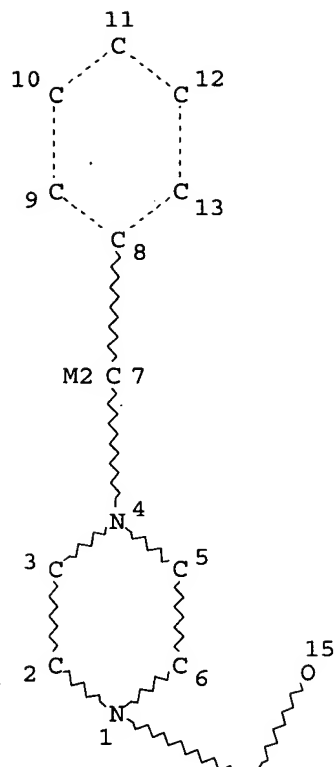
HCOUNT	IS	M2	AT	7
NSPEC	IS	R	AT	1
NSPEC	IS	R	AT	2
NSPEC	IS	R	AT	3
NSPEC	IS	R	AT	4
NSPEC	IS	R	AT	5
NSPEC	IS	R	AT	6
NSPEC	IS	C	AT	7
NSPEC	IS	R	AT	8
NSPEC	IS	R	AT	9
NSPEC	IS	R	AT	10
NSPEC	IS	R	AT	11
NSPEC	IS	R	AT	12
NSPEC	IS	R	AT	13
NSPEC	IS	C	AT	14
NSPEC	IS	C	AT	15
NSPEC	IS	C	AT	16
CONNECT	IS	E3	RC	AT 14
CONNECT	IS	E1	RC	AT 15
DEFAULT	MLEVEL	IS	ATOM	
MLEVEL	IS	CLASS	AT	7 14 15
GGCAT	IS	UNS	AT	16
DEFAULT	ECLEVEL	IS	LIMITED	

## GRAPH ATTRIBUTES:

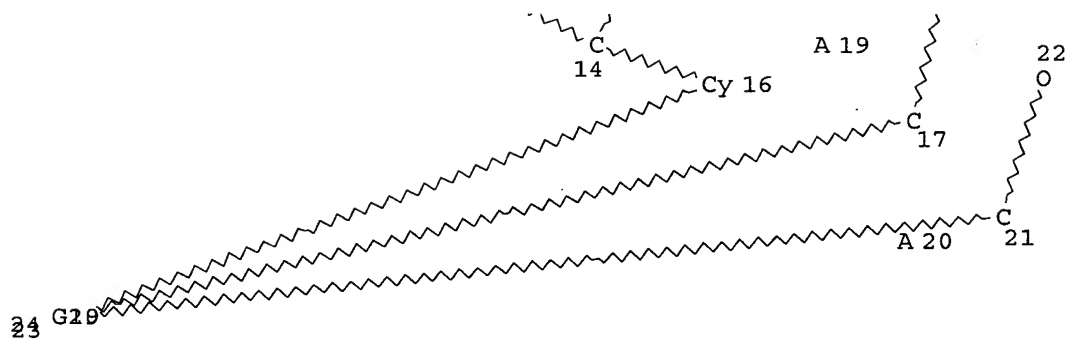
RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 16

## STEREO ATTRIBUTES: NONE

L2 5033 SEA FILE=REGISTRY SSS FUL L1  
L9 STR



Page 1-A



Page 2-A

REP G19=(0-4) 20-17 20-21

REP G20=(0-4) 19-16 19-17

NODE ATTRIBUTES:

HCOUNT	IS M2	AT	7
NSPEC	IS R	AT	1
NSPEC	IS R	AT	2
NSPEC	IS R	AT	3
NSPEC	IS R	AT	4
NSPEC	IS R	AT	5
NSPEC	IS R	AT	6
NSPEC	IS C	AT	7
NSPEC	IS R	AT	8
NSPEC	IS R	AT	9
NSPEC	IS R	AT	10

NSPEC IS R AT 11  
NSPEC IS R AT 12  
NSPEC IS R AT 13  
NSPEC IS C AT 14  
NSPEC IS C AT 15  
NSPEC IS C AT 16  
NSPEC IS C AT 17  
NSPEC IS C AT 18  
NSPEC IS RC AT 19  
NSPEC IS RC AT 20  
NSPEC IS C AT 21  
NSPEC IS C AT 22  
NSPEC IS C AT 23  
NSPEC IS C AT 24  
CONNECT IS E3 RC AT 14  
CONNECT IS E1 RC AT 15  
CONNECT IS E3 RC AT 17  
CONNECT IS E1 RC AT 18  
CONNECT IS X3 RC AT 21  
CONNECT IS E1 RC AT 22  
DEFAULT MLEVEL IS ATOM  
MLEVEL IS CLASS AT 7 14 15 17 18 19 20 21 22  
GGCAT IS UNS AT 16  
DEFAULT ECLEVEL IS LIMITED

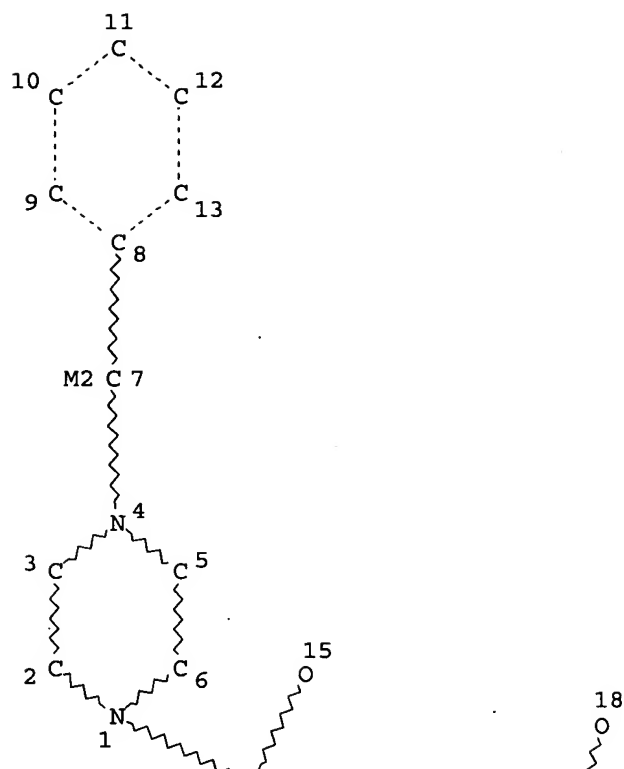
## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

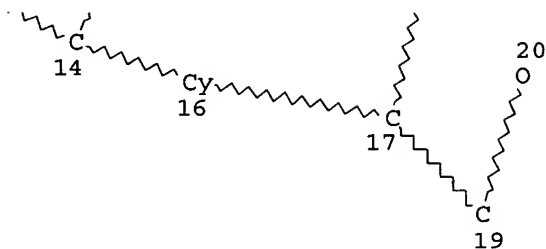
NUMBER OF NODES IS 24

## STEREO ATTRIBUTES: NONE

L11 275 SEA FILE=REGISTRY SUB=L2 SSS FUL L9  
L12 17 SEA FILE=CAPLUS ABB=ON PLU=ON L11  
L14 STR



Page 1-A



Page 2-A

NODE ATTRIBUTES:

HCOUNT	IS M2	AT	7
NSPEC	IS R	AT	1
NSPEC	IS R	AT	2
NSPEC	IS R	AT	3
NSPEC	IS R	AT	4
NSPEC	IS R	AT	5
NSPEC	IS R	AT	6
NSPEC	IS C	AT	7
NSPEC	IS R	AT	8
NSPEC	IS R	AT	9
NSPEC	IS R	AT	10
NSPEC	IS R	AT	11
NSPEC	IS R	AT	12
NSPEC	IS R	AT	13
NSPEC	IS C	AT	14
NSPEC	IS C	AT	15

NSPEC IS C AT 16  
NSPEC IS C AT 17  
NSPEC IS C AT 18  
NSPEC IS C AT 19  
NSPEC IS C AT 20  
CONNECT IS E3 RC AT 14  
CONNECT IS E1 RC AT 15  
CONNECT IS E3 RC AT 17  
CONNECT IS E1 RC AT 18  
CONNECT IS X3 RC AT 19  
CONNECT IS E1 RC AT 20  
DEFAULT MLEVEL IS ATOM  
MLEVEL IS CLASS AT 7 14 15 17 18 19 20  
GGCAT IS UNS AT 16  
DEFAULT ECLEVEL IS LIMITED

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RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 20

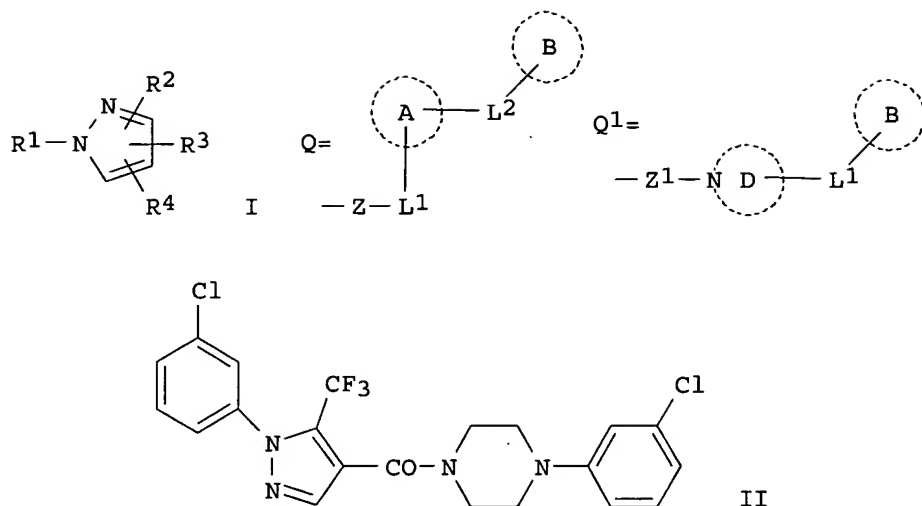
STEREO ATTRIBUTES: NONE  
L27 51 SEA FILE=MARPAT SSS FUL L14  
L29 40 SEA FILE=MARPAT ABB=ON PLU=ON L27 NOT L12

=> d ibib abs hit L29 1-40

L29 ANSWER 1 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 142:155945 MARPAT  
TITLE: Preparation of pyrazole-carboxamides and -sulfonamides  
as sodium channel modulators  
INVENTOR(S): Atkinson, Robert N.; Drizin, Irene; Gregg, Robert J.;  
Gross, Michael F.; Kort, Michael E.; Shi, Lei  
PATENT ASSIGNEE(S): USA  
SOURCE: U.S. Pat. Appl. Publ., 25 pp.  
CODEN: USXXCO  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005020564	A1	20050127	US 2004-838087	20040503
PRIORITY APPLN. INFO.: GI			US 2003-466980P	20030501



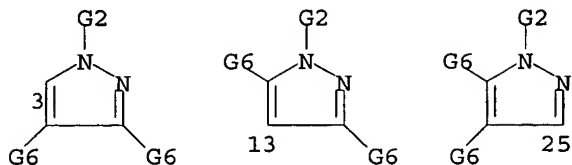


AB The title compds. (I), pharmaceutically acceptable salts, amides, esters, or prodrugs thereof [wherein R<sup>1</sup> = alkyl, aryl, arylalkyl, cycloalkyl, cycloalkylalkyl, haloalkyl, heterocyclyl, heterocyclealkyl, heteroaryl, heteroarylalkyl; R<sup>2</sup>, R<sup>3</sup> = H, alkenyl, alkoxy, alkoxyalkyl, alkoxycarbonyl, alkyl, alkylcarbonyl, alkylcarbonyloxy, alkylthio, alkynyl, aryl, arylalkyl, carboxy, cycloalkyl, cycloalkylalkyl, cyano, formyl, haloalkoxy, haloalkyl, halogen, hydroxy, hydroxyalkyl, mercapto, nitro, -NRARB, or CONRARB; RA, RB = H, alkyl, or alkylcarbonyl; R<sup>4</sup> = Q, Q<sup>1</sup>; Z = C(:X)NR<sup>5</sup>, SO<sub>2</sub>NR<sup>5</sup>, NR<sup>5</sup>C(:X), NR<sup>5</sup>SO<sub>2</sub>; Z<sup>1</sup> = C(:X), SO<sub>2</sub>; X = O, S; R<sup>5</sup> = H, alkyl, alkylcarbonyl, alkylcarbonyloxy, heterocyclealkyl; L<sup>1</sup>, L<sup>2</sup> = a bond or alkylene; A = aryl, cycloalkyl, heteroaryl, or heterocyclyl; B = aryl, cycloalkyl, heteroaryl, heterocyclyl; D = (un)substituted heterocycle wherein the heterocycle is azetidiny, azepanyl, aziridiny, azocanyl, 1,1-dioxidothiomorpholinyl, morpholinyl, piperazinyl, piperidiny, pyrrolidinyl, or thiomorpholinyl] are prepared. These compds., e.g. (II), modulate Nav1.8 (SNS/PN3) sodium channel in mammals and are useful in treating neuropathic pain in mammals. Clin. manifestations of neuropathic pain include a sensation of burning or elec. shock, feelings of bodily distortion, allodynia, and hyperalgesia. Spontaneously ectopic action potential firing in dorsal root ganglion (DRG) neurons is believed to be the underlying mechanism that evokes neuropathic pain following nerve injury. Tetrodotoxin-resistant (TTX-R) current increases in chronic pain, and several studies have implicated Nav1.8 as the primary channel responsible for this increased current. A Nav1.8 channel inhibitor may attenuate neuropathic pain by blocking currents in L4 dorsal root ganglion DRG neurons, as well as by blocking currents generated at the nociceptive peripheral terminals. To examine functional effects, TTX-R sodium currents were studied in dorsal root ganglion (DRG) neurons from rats 14 days following spinal nerve ligation (SNL). Representative compds. I demonstrated IC<sub>50</sub>s from .apprx.500 nM to .apprx.3 μM for blocking tetrodotoxin-resistant (TTX-R) currents in rat L4 DRG neurons.

MSTR 1

G1—G10

G1 = 3 / 13 / 25



G2 = alkyl <containing 1-10 C>  
 (opt. substd. by 1 or more G4) /  
 Ph (opt. substd. by 1 or more G23) /  
 aryl <2-3 rings> (opt. substd.) /  
 cycloalkyl <containing 3-8 C> (opt. substd.) / 29 /  
 heterocycle <containing 3-8 atoms, 1-3 heteroatoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 0-3 double bonds,  
 3- to 8-membered monocyclic ring> (opt. substd.) /  
 heteroaryl <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.)

G5—G3  
 29

G3 = Ph (opt. substd.) / aryl <2-3 rings>  
 (opt. substd.) / cycloalkyl <containing 3-8 C>  
 (opt. substd.) / heterocycle <containing 3-8 atoms,  
 1-3 heteroatoms, zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 0-3 double bonds,  
 3- to 8-membered monocyclic ring> (opt. substd.) /  
 heteroaryl <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.)

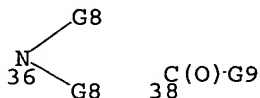
G4 = F / Cl / Br / I

G5 = alkylene &lt;containing 1-10 C&gt;

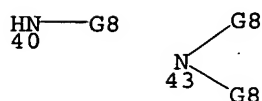
G6 = H / alkenyl <containing 2-10 C> /  
 alkoxy <containing 1-10 C> (opt. substd. by 1 or more G4) /  
 31 / alkoxycarbonyl <containing 1-10 C> /  
 alkyl <containing 1-10 C> (opt. substd. by 1 or more G4) /  
 alkylcarbonyl <containing 1-10 C> /  
 alkylcarbonyloxy <containing 1-10 C> /  
 alkylthio <containing 1-10 C> / alkynyl <containing 2-10 C> /  
 Ph (opt. substd.) / aryl <2-3 rings> (opt. substd.) / CO<sub>2</sub>H /  
 cycloalkyl <containing 3-8 C> / CN / CHO / F / Cl / Br / I /  
 OH / **alkyl <containing 1-10 C> (substd. by 1 or more OH)** /  
 SH / NO<sub>2</sub> / NH<sub>2</sub> / 33 / 36 / 38 / (Specifically claimed: CF<sub>3</sub> /  
 Me)

G5—G7  
 31

HN—G8  
 33



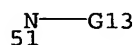
G7 = alkoxy <containing 1-10 C> / Ph (opt. substd.) /  
 aryl <2-3 rings> (opt. substd.) /  
 cycloalkyl <containing 3-8 C> (opt. substd.)  
 G8 = alkyl <containing 1-10 C> /  
 alkylcarbonyl <containing 1-10 C>  
 G9 = NH2 / 40 / 43



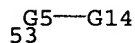
G10 = 45 / 55 / 61

G11-G12-G15-G17-G16-G18    G12-G11-G15-G22-G16-G18    G11-G19-G16-G18  
 45                    47                    49                    55                    61                    63

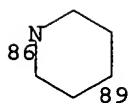
G11 = C(O) / C(S) / SO2  
 G12 = NH / 51



G13 = alkyl <containing 1-10 C> /  
 alkylcarbonyl <containing 1-10 C> /  
 alkylcarbonyloxy <containing 1-10 C> / 53

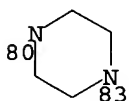


G14 = heterocycle <containing 3-8 atoms, 1-3 heteroatoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 0-3 double bonds,  
 3- to 8-membered monocyclic ring> (opt. substd.)  
 G15 = bond / alkylene <containing 1-10 C>  
 G16 = bond / alkylene <containing 1-10 C> /  
 (Specifically claimed: CH2)  
 G17 = phenylene (opt. substd.) /  
 arylene <2-3 rings> (opt. substd.) /  
 cycloalkylene <containing 3-8 C> (opt. substd.) /  
 heterocycle <containing 3-8 atoms, 1-3 heteroatoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 0-3 double bonds,  
 3- to 8-membered monocyclic ring> (opt. substd.) /  
 heteroarylene <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.) / (Specifically claimed: 89-47 86-49 )

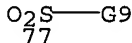
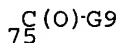
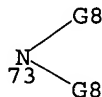
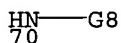
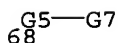


G18 = Ph (opt. substd. by 1 or more G23) /

- aryl <2-3 rings> (opt. substd.) /  
 cycloalkyl <containing 3-8 C> (opt. substd.) /  
 heterocycle <containing 3-8 atoms, 1-3 heteroatoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 0-3 double bonds,  
 3- to 8-membered monocyclic ring> (opt. substd.) /  
 heteroaryl <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.) / (Specifically claimed: cyclohexyl)  
 G19 = heterocycle <containing 4-8 atoms, 1-2 heteroatoms,  
 1-2 N, zero or more O, zero or more S (no other heteroatoms)  
 , attached through 1 or more N, non-aromatic, saturated,  
 4- to 8-membered monocyclic ring>  
 (opt. substd. by (1-4) G20) / 66 /  
 (Specifically claimed: 80-61 83-63 )



- G20 = alkenyl <containing 2-10 C> /  
 alkoxy <containing 1-10 C> (opt. substd. by 1 or more G4) /  
 68 / alkoxycarbonyl <containing 1-10 C> /  
 alkoxysulfonyl <containing 1-10 C> /  
 alkyl <containing 1-10 C> (opt. substd. by 1 or more G4) /  
 alkylcarbonyl <containing 1-10 C> /  
 alkylcarbonyloxy <containing 1-10 C> /  
 alkylsulfonyl <containing 1-10 C> /  
 alkynyl <containing 2-10 C> / CO<sub>2</sub>H / CN / CHO / F / Cl / Br /  
 I / OH / alkyl <containing 1-10 C>  
 (substd. by 1 or more OH) / SH / NH<sub>2</sub> / 70 / 73 / 75 / 77



- G21 = heterocycle <containing 6 atoms, 2 heteroatoms,  
 1 N, 1 S (no other heteroatoms), 4 C, attached through 1 N,  
 1 S, non-aromatic, saturated, 6-membered monocyclic ring>  
 (opt. substd. by (1-4) G20)  
 G22 = phenylene (opt. substd.) /  
 arylene <2-3 rings> (opt. substd.) /  
 cycloalkylene <containing 3-8 C> (opt. substd.) /  
 heterocycle <containing 3-8 atoms, 1-3 heteroatoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 0-3 double bonds,  
 3- to 8-membered monocyclic ring> (opt. substd.) /  
 heteroarylene <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.)  
 G23 = R / (Specifically claimed: F / Cl / Br / I)  
 Patent location: claim 1  
 Note: or pharmaceutically acceptable salts, amides,  
 esters or prodrugs

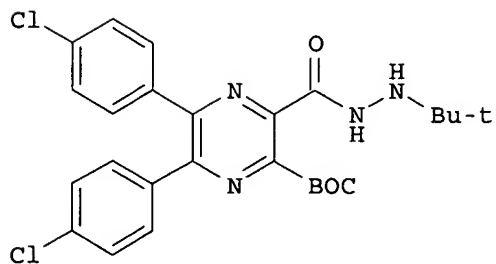
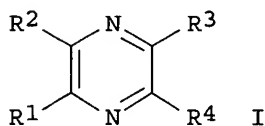
L29 ANSWER 2 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 142:56362 MARPAT  
 TITLE: Preparation of 3-substituted 5,6-diaryl-pyrazine-2-carboxamide and 2-sulfonamide derivatives as cannabinoid receptor 1 (CB1) modulators  
 INVENTOR(S): Cheng, Leifeng  
 PATENT ASSIGNEE(S): Astrazeneca AB, Swed.  
 SOURCE: PCT Int. Appl., 120 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004111034	A1	20041223	WO 2004-SE970	20040616
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.:

GB 2003-14057 20030618

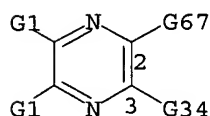
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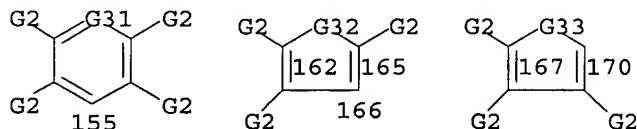
AB Title compds. I [wherein R1, R2 = independently (un)substituted Ph, thienyl, pyridinyl; R3 = X-Y-NR5R6; X = absent, CO, or SO2; Y = absent, NH optionally substituted by an alkyl group; R5, R6 = independently (un)substituted amino/alkyl, (CH2)r(phenyl)s, (un)saturated 5-8-membered heterocyclyl; R5 = H and R6 = defined above; or R5NR6 = (un)substituted (un)saturated 5-8-membered heterocyclyl; r = 0-4; s = 1 when r = 0, otherwise s = 1 or 2; R5NR6 = (un)substituted (un)saturated 5-8-membered heterocyclyl; R4 = (CH2)nCO2R7; n = 0-4; R7 = (un)substituted cycloalkyl/cyclo/alkyl, (CH2)nphenyl, saturated or partially unsatd. 5-8-membered heterocyclyl, CONH2 and derivs.; n = defined as above; and pharmaceutically acceptable salts thereof] were prepared as cannabinoid 1 (CB1) receptor modulators. For example, reacting 3-(tert-butoxycarbonyl)-5,6-bis(4-chlorophenyl)pyrazine-2-carboxylic acid (preparation given) with tert-butylhydrazine hydrochloride gave pyrazine II. I are active at the CB1 receptor (IC50 < 1 μM), most preferred compds. have IC50 < 200 nM. For instance, II exhibited an IC50 (hCB1) = 1.8 nM. Thus, I and their pharmaceutical compns. are useful for the treatment of obesity, psychiatric and neurol. disorders (no data).

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

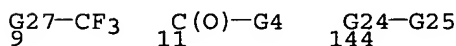
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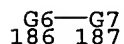
G1 = 155 / 166 / 170



G2 = H / alkyl <containing 1-8 C> /  
alkoxy <containing 1-6 C> (opt. substd. by F) /  
cycloalkyl <containing 3-8 C> / OH / F / Cl / Br / I / CF3 /  
9 / NO2 / 11 / NH2 / 144 / alkylthio <containing 1-3 C> /  
alkylsulfonyl <containing 1-3 C> /  
alkylsulfonyloxy <containing 1-3 C> / CN / SO2NH2 / COMe /  
heterocycle <containing up to 10 atoms, zero or more N,  
zero or more O, zero or more S (no other heteroatoms)> /  
(Specifically claimed: Me)

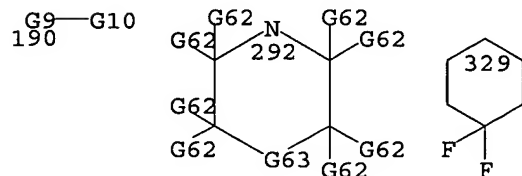


G3 = C(O) / SO2 / 186-2 187-185

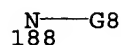


G4 = alkylamino <containing 1-3 C> /

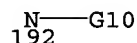
dialkylamino <each alkyl containing 1-3 C> / OH /  
alkoxy <containing 1-3 C> / NH2  
G5 = heterocycle <containing 5-8 atoms, 1-2 heteroatoms,  
1 or more N, zero or more O, zero or more S (no other  
heteroatoms), attached through 1 or more N>  
(opt. substd. by 1 or more G23) / 190 / 329 /  
alkyl <containing 3-6 C> (opt. substd. by OH) /  
(Specifically claimed: 292)



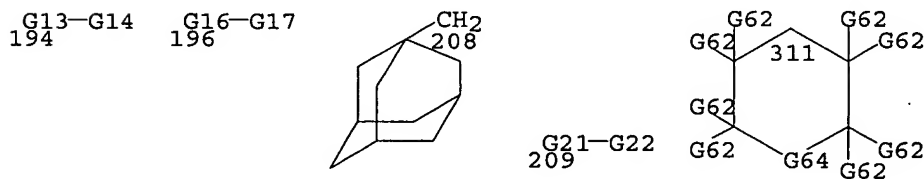
G6 = C(O) / SO2  
G7 = NH / 188



G8 = alkyl <containing 1-3 C>  
G9 = NH / 192



G10 = alkyl <containing 1-6 C>  
(opt. substd. by 1 or more OH) /  
alkyl <containing 1-6 C> (substd. by G11) /  
cycloalkyl <containing 3-12 C> (opt. substd. by 1 or more  
G12) / 194 / Ph (opt. substd. by G2) / 196 / naphthyl /  
anthracenyl / heterocycle <containing 5-8 atoms,  
zero or more N, zero or more O,  
zero or more S (no other heteroatoms)>  
(opt. substd. by G19) / 208 / heteroaryl <containing zero or  
more N, zero or more O, zero or more S (no other heteroatoms)  
> (opt. substd. by G20) / 209 / (Specifically claimed: 311)



G11 = NH2 / dialkylamino <containing 1-3 C> /  
dialkylamino <each alkyl containing 1-3 C>  
G12 = F / OH / alkyl <containing 1-3 C> /  
alkoxy <containing 1-3 C> / CF3 / OCF3  
G13 = (1-3) CH2  
G14 = cycloalkyl <containing 3-12 C>  
(opt. substd. by 1 or more G12)  
G16 = alkylene <containing 1-4 C>

(opt. substd. by Ph (opt. substd.)) / G18  
 G17 = Ph (opt. substd. by G2)  
 G18 = (1-4) CH2  
 G19 = alkyl <containing 1-3 C> / OH / F / CF3 / CH2Ph /  
 NH2 / alkylamino <containing 1-4 C> /  
 dialkylamino <each alkyl containing 1-4 C>  
 G20 = alkyl <containing 1-5 C> /  
 alkoxy <containing 1-5 C> / F / Cl / Br / I  
 G21 = alkylene <containing 1-4 C, unbranched>  
 (opt. substd. by alkyl <containing 1-3 C>)  
 G22 = heteroaryl <containing zero or more N,  
 zero or more O, zero or more S (no other heteroatoms)>  
 (opt. substd. by G20)  
 G23 = alkyl <containing 1-3 C> / OH / F / CF3 / OCF3 /  
 CH2Ph / CHO / alkylcarbonyl <containing 1-6 C> / NH2 /  
 alkylamino <containing 1-4 C> /  
 dialkylamino <each alkyl containing 1-4 C>  
 G24 = NH / 146

$\text{N} \text{---} \text{G25}$   
 146

G25 = alkyl <containing 1-6 C> / 148 /  
 alkylcarbonyl <containing 1-6 C>

$\text{C}(\text{O}) \text{---} \text{G30}$   
 148

G27 = S / O / SO2  
 G28 = (0-4) CH2  
 G29 = 264-3 266-230 / 267-3 270-230 / bond / G44 /  
 alkylene <containing 2-6 C, unbranched>  
 (opt. substd. by 1 or more G50) / 361-3 364-230

$\text{G42} \text{---} \text{O} \text{---} \text{G42}$     $\text{G28} \text{---} \text{C}(\text{O}) \text{---} \text{O} \text{---} \text{G28}$     $\text{G28} \text{---} \text{O} \text{---} \text{C}(\text{O}) \text{---} \text{G28}$   
 264   266   267   270   361   364

G30 = H / alkoxy <containing 1-6 C>  
 G31 = N / 156

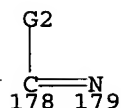
$\text{C} \text{---} \text{G2}$   
 156

G32 = S / 172-162 173-165

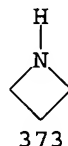
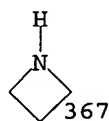
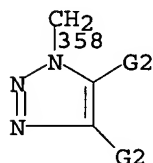
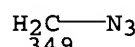
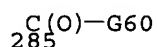
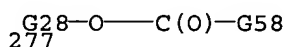
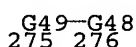
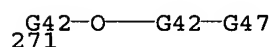
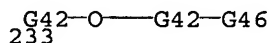
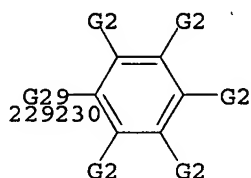
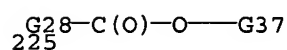
$\text{G2}$   
 $\text{C} \text{---} \text{N}$   
 172 173

G33 = S / 178-167 179-170





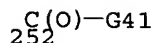
G34 = 225 / 233 / 229 / 271 /  
 alkyl <containing 4-12 C> (opt. substd. by 1 or more G35) /  
 any ring <containing up to 12 atoms, zero or more N,  
 zero or more O, zero or more S (no other heteroatoms)>  
 (opt. substd. by G2) / 275 / 277 / 285 /  
 alkyl <containing 1-6 C> (substd. by CN) / 349 / 358 /  
 (Specifically claimed: triazolyl (opt. substd. by G65) /  
 tetrazolyl (opt. substd. by G65) / imidazolyl / pyrrolyl /  
 thiazolyl / oxazolyl / isoxazolyl / isothiazolyl /  
 oxadiazolyl / thiadiazolyl / azetidino / 367 / 373)



G35 = F / OH / NH2

G37 = alkyl <containing 4-12 C>  
 (opt. substd. by 1 or more G56) /  
 cycloalkyl <containing 3-12 C> (opt. substd. by 1 or more  
 G56) / alkyl <containing 1-3 C> (substd. by 1 or more G57) /  
 heterocycle <containing 5-8 atoms, zero or more N,  
 zero or more O, zero or more S (no other heteroatoms)>  
 (opt. substd. by 1 or more G40) /  
 (Specifically claimed: Bu-n / Bu-t / cyclohexyl / CH2Ph)

G40 = alkyl <containing 1-3 C> / OH / NH2 / CH2Ph / 252

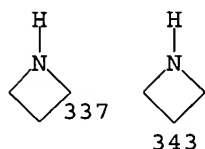


G41 = carbon chain <containing 1-3 C> (opt. substd.) / H /  
 R

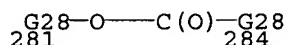
G42 = alkylene <containing 1-4 C, unbranched>  
 (opt. substd. by 1 or more G45) / bond / G44

G44 = (1-4) CH2

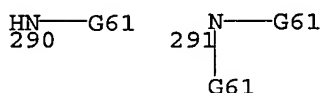
- G45 = alkyl <containing 1-6 C> /  
alkoxy <containing 1-6 C> / OH
- G46 = alkyl <containing 1-12 C>
- G47 = alkoxy <containing 1-12 C> /  
any ring <containing zero or more N, zero or more O,  
zero or more S (no other heteroatoms)> (opt. substd. by G2)
- G48 = any ring <containing up to 12 atoms,  
zero or more N, zero or more O,  
zero or more S (no other heteroatoms)> (opt. substd. by G2) /  
(Specifically claimed: triazolyl (opt. substd. by G65) /  
tetrazolyl (opt. substd. by G65) / imidazolyl / pyrrolyl /  
thiazolyl / oxazolyl / isoxazolyl / isothiazolyl /  
oxadiazolyl / thiadiazolyl / azetidino / 337 / 343)



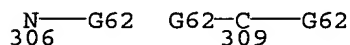
- G49 = G44 / alkylene <containing 2-6 C, unbranched>  
(opt. substd. by 1 or more G50) / 281-3 284-276



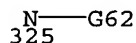
- G50 = alkyl <containing 1-4 C>
- G56 = alkyl <containing 1-6 C> / F / NH<sub>2</sub> / OH
- G57 = alkyl <containing 1-6 C> / F / NH<sub>2</sub> / OH /  
1 or more cycloalkyl <containing 3-12 C>  
(opt. substd. by 1 or more G56)
- G58 = alkyl <containing 1-12 C>  
(opt. substd. by 1 or more G59)
- G59 = F / OH / NH<sub>2</sub>
- G60 = NH<sub>2</sub> / 290 / 291



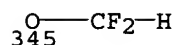
- G61 = alkyl <containing 1-8 C> (opt. substd. by OH)
- G62 = H / alkyl <containing 1-3 C> / OH / F / CF<sub>3</sub> / OCF<sub>3</sub> /  
**CH<sub>2</sub>Ph** / CHO / alkylcarbonyl <containing 1-6 C> / NH<sub>2</sub> /  
alkylamino <containing 1-4 C> /  
dialkylamino <each alkyl containing 1-4 C>
- G63 = O / 306 / 309



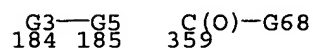
- G64 = O / 325



G65 = alkylthio <containing 1-3 C> /  
 cycloalkyl <containing 3-6 C> /  
 alkyl <containing 1 or more C> (opt. substd. by G66)  
 G66 = OH / 345 / alkylamino <containing 1-6 C>  
 (opt. substd. by NH2) / dialkylamino /  
 heterocycle <containing 5-6 atoms, 1-2 heteroatoms, 1-2 N,  
 0-1 O, saturated, monocyclic> /  
 cycloalkyl <containing 3-6 C>



G67 = 184 / 359



G68 = OH / alkoxy / R <"leaving group">  
 Patent location: claim 1  
 Note: substitution is restricted  
 Note: also incorporates claims 4 and 13  
 Note: or pharmaceutically acceptable salts  
 Note: additional substitution also claimed

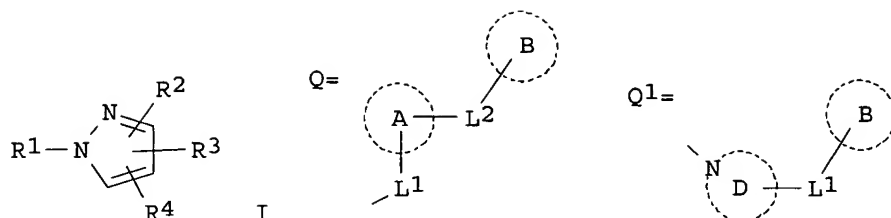
L29 ANSWER 3 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 141:395577 MARPAT  
 TITLE: Preparation of pyrazole-amides and -sulfonamides as  
 sodium channel modulators  
 INVENTOR(S): Atkinson, Robert N.; Drizin, Irene; Gregg, Robert J.;  
 Gross, Michael F.; Kort, Michael E.; Shi, Lei  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 27 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004220170	A1	20041104	US 2003-427847	20030501
WO 2004099154	A2	20041118	WO 2004-US13530	20040429
WO 2004099154	A3	20050414		

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 GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
 LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,  
 NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,  
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 EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,  
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PRIORITY APPLN. INFO.: US 2003-427847 20030501  
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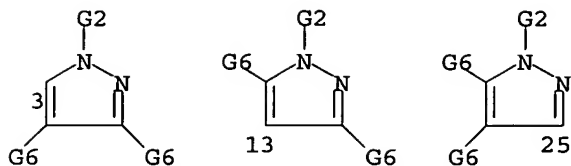


AB The title compds. (I) pharmaceutically acceptable salts, amides, esters, or prodrugs thereof [wherein R1 = alkyl, aryl, arylalkyl, cycloalkyl, cycloalkylalkyl, haloalkyl, heterocyclyl, heterocyclealkyl, heteroaryl, heteroarylalkyl; R2, R3 = H, alkenyl, alkoxy, alkoxyalkyl, alkoxycarbonyl, alkyl, alkylcarbonyl, alkylcarbonyloxy, alkylthio, alkynyl, aryl, arylalkyl, carboxy, cycloalkyl, cycloalkylalkyl, cyano, formyl, haloalkoxy, haloalkyl, halogen, hydroxy, hydroxyalkyl, mercapto, nitro, -NRARB, (NRARB)carbonyl; RA, RB = H, alkyl, alkylcarbonyl; R4 = C(:X)N(R5)R, SO<sub>2</sub>N(R5)R, N(R5)C(:X)R, N(R5)SO<sub>2</sub>R, C(:X)R', SO<sub>2</sub>R' (wherein R = Q, R' = Q1; X = O, S; R5 = H, alkyl, alkylcarbonyl, alkylcarbonyloxy, heterocyclylalkyl; L1, L2 = a bond, alkylene; A, B = aryl, cycloalkyl, heteroaryl, heterocycle; D = optionally substituted heterocycle wherein the heterocycle is azetidiny, azepanyl, aziridiny, azocanyl, 1,1-dioxidothiomorpholinyl, morpholinyl, piperazinyl, piperidinyl, pyrrolidinyl, or thiomorpholinyl)] are prepared. The compds. I modulate PN3 (a member of a family of voltage-gated sodium channels) in mammals and are useful in treating neuropathic pain including burning or elec. shock, feelings of bodily distortion, allodynia, and hyperalgesia in mammals. Thus, 3-[(dimethylamino)methylene]-1,1,1,5,5,5-hexafluoropentane-2,4-dione was cyclocondensed with 4-Chlorophenylhydrazine hydrochloride in the presence of Et<sub>3</sub>N in MeCN at ambient temperature for 16 h to give 1-(4-Chlorophenyl)-5-trifluoromethyl-1H-pyrazole-4-carboxylic acid which was treated with oxalyl chloride in the presence of DMF in CH<sub>2</sub>Cl<sub>2</sub> at ambient temperature for 1 h, concentrated, and amidated with 1-(3-chlorophenyl)piperazine and Et<sub>3</sub>N at ambient temperature for 1 h to give, after silica gel chromatog. and treatment with ethanolic HCl, 1-(3-chlorophenyl)-4-[[1-(4-chlorophenyl)-5-(trifluoromethyl)-1H-pyrazol-4-yl]carbonyl]piperazine hydrochloride. Tetrodotoxin-resistant (TTX-R) sodium currents were studied in dorsal root ganglion (DRG) neurons from rats 14 days following spinal nerve ligation (SNL). Representative compds. I demonstrated IC<sub>50</sub> from about 500 nM to about 3 μM for blocking TTX-R sodium currents in L4 DRG neurons.

MSTR 1

G1—G10

G1 = 3 / 13 / 25



G2 = alkyl <containing 1-10 C>  
 (opt. substd. by 1 or more G4) /  
 Ph (opt. substd. by 1 or more G23) /  
 aryl <2-3 rings> (opt. substd.) /  
 cycloalkyl <containing 3-8 C> (opt. substd.) / 29 /  
 heterocycle <containing 3-8 atoms, 1-3 heteroatoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 0-3 double bonds,  
 3- to 8-membered monocyclic ring> (opt. substd.) /  
 heteroaryl <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.)

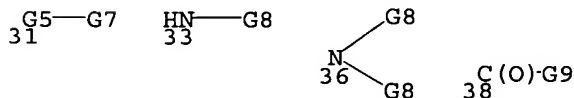
<sup>G5—G3</sup>  
 29

G3 = Ph (opt. substd.) / aryl <2-3 rings>  
 (opt. substd.) / cycloalkyl <containing 3-8 C>  
 (opt. substd.) / heterocycle <containing 3-8 atoms,  
 1-3 heteroatoms, zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 0-3 double bonds,  
 3- to 8-membered monocyclic ring> (opt. substd.) /  
 heteroaryl <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.)

G4 = F / Cl / Br / I

G5 = alkylene <containing 1-10 C>

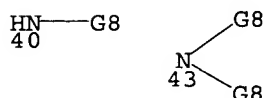
G6 = H / alkenyl <containing 2-10 C> /  
 alkoxy <containing 1-10 C> (opt. substd. by 1 or more G4) /  
 31 / alkoxycarbonyl <containing 1-10 C> /  
 alkyl <containing 1-10 C> (opt. substd. by 1 or more G4) /  
 alkylcarbonyl <containing 1-10 C> /  
 alkylcarbonyloxy <containing 1-10 C> /  
 alkylthio <containing 1-10 C> / alkynyl <containing 2-10 C> /  
 Ph (opt. substd.) / aryl <2-3 rings> (opt. substd.) / CO<sub>2</sub>H /  
 cycloalkyl <containing 3-8 C> / CN / CHO / F / Cl / Br / I /  
 OH / **alkyl <containing 1-10 C> (substd. by 1 or more OH)** /  
 SH / NO<sub>2</sub> / NH<sub>2</sub> / 33 / 36 / 38 / (Specifically claimed: CF<sub>3</sub> /  
 Me)



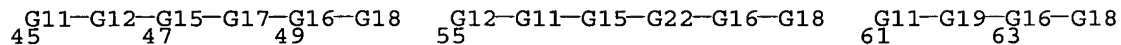
G7 = alkoxy <containing 1-10 C> / Ph (opt. substd.) /  
 aryl <2-3 rings> (opt. substd.) /  
 cycloalkyl <containing 3-8 C> (opt. substd.)

G8 = alkyl <containing 1-10 C> /

G9 = alkylcarbonyl <containing 1-10 C>  
= NH2 / 40 / 43

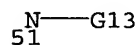


G10 = 45 / 55 / 61

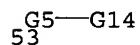


G11 = C(O) / C(S) / SO2

G12 = NH / 51



G13 = alkyl <containing 1-10 C> /  
alkylcarbonyl <containing 1-10 C> /  
alkylcarbonyloxy <containing 1-10 C> / 53



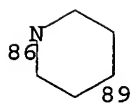
G14 = heterocycle <containing 3-8 atoms, 1-3 heteroatoms,  
zero or more N, zero or more O,  
zero or more S (no other heteroatoms), 0-3 double bonds,  
3- to 8-membered monocyclic ring> (opt. substd.)

G15 = bond / alkylene <containing 1-10 C>

G16 = bond / alkylene <containing 1-10 C> /

(Specifically claimed: CH2)

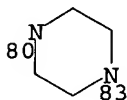
G17 = phenylene (opt. substd.) /  
arylene <2-3 rings> (opt. substd.) /  
cycloalkylene <containing 3-8 C> (opt. substd.) /  
heterocycle <containing 3-8 atoms, 1-3 heteroatoms,  
zero or more N, zero or more O,  
zero or more S (no other heteroatoms), 0-3 double bonds,  
3- to 8-membered monocyclic ring> (opt. substd.) /  
heteroarylene <containing zero or more N, zero or more O,  
zero or more S (no other heteroatoms), 1-3 rings>  
(opt. substd.) / (Specifically claimed: 89-47 86-49 )



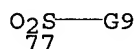
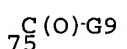
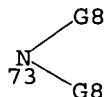
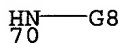
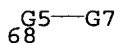
G18 = Ph (opt. substd. by 1 or more G23) /  
aryl <2-3 rings> (opt. substd.) /  
cycloalkyl <containing 3-8 C> (opt. substd.) /  
heterocycle <containing 3-8 atoms, 1-3 heteroatoms,  
zero or more N, zero or more O,

zero or more S (no other heteroatoms), 0-3 double bonds,  
 3- to 8-membered monocyclic ring> (opt. substd.) /  
 heteroaryl <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.) / (Specifically claimed: cyclohexyl)

- G19 = heterocycle <containing 4-8 atoms, 1-2 heteroatoms,  
 1-2 N, zero or more O, zero or more S (no other heteroatoms)  
 , attached through 1 or more N, non-aromatic, saturated,  
 4- to 8-membered monocyclic ring>  
 (opt. substd. by (1-4) G20) / 66 /  
 (Specifically claimed: 80-61 83-63 )



- G20 = alkenyl <containing 2-10 C> /  
 alkoxy <containing 1-10 C> (opt. substd. by 1 or more G4) /  
 68 / alkoxycarbonyl <containing 1-10 C> /  
 alkoxysulfonyl <containing 1-10 C> /  
 alkyl <containing 1-10 C> (opt. substd. by 1 or more G4) /  
 alkylcarbonyl <containing 1-10 C> /  
 alkylcarbonyloxy <containing 1-10 C> /  
 alkylsulfonyl <containing 1-10 C> /  
 alkynyl <containing 2-10 C> / CO<sub>2</sub>H / CN / CHO / F / Cl / Br /  
 I / OH / alkyl <containing 1-10 C>  
 (substd. by 1 or more OH) / SH / NH<sub>2</sub> / 70 / 73 / 75 / 77



- G21 = heterocycle <containing 6 atoms, 2 heteroatoms,  
 1 N, 1 S (no other heteroatoms), 4 C, attached through 1 N,  
 1 S, non-aromatic, saturated, 6-membered monocyclic ring>  
 (opt. substd. by (1-4) G20)
- G22 = phenylene (opt. substd.) /  
 arylene <2-3 rings> (opt. substd.) /  
 cycloalkylene <containing 3-8 C> (opt. substd.) /  
 heterocycle <containing 3-8 atoms, 1-3 heteroatoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 0-3 double bonds,  
 3- to 8-membered monocyclic ring> (opt. substd.) /  
 heteroarylene <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.)
- G23 = R / (Specifically claimed: F / Cl / Br / I)
- Patent location: claim 1
- Note: or pharmaceutically acceptable salts, amides,  
 esters or prodrugs

L29 ANSWER 4 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 140:270852 MARPAT

TITLE: Preparation of nitrogen containing heterocyclic

compounds as compounds useful for in the treatment of histamine H4 receptor mediated diseases

INVENTOR(S): Carruthers, Nicholas I.; Dvorak, Curt A.; Edwards, James P.; Grice, Cheryl A.; Jablonowski, Jill A.; Ly, Kiev S.; Pio, Barbara A.; Shah, Chandravadan R.; Venable, Jennifer D.

PATENT ASSIGNEE(S): Janssen Pharmaceutica, N.V., Belg.

SOURCE: PCT Int. Appl., 70 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

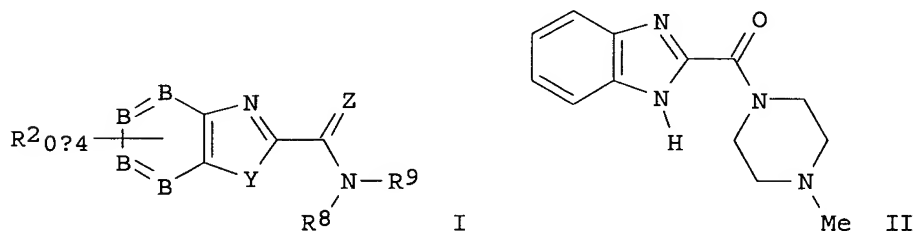
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004022060	A2	20040318	WO 2003-US27461	20030904
WO 2004022060	C1	20040603		
WO 2004022060	A3	20040708		
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2497827	AA	20040318	CA 2003-2497827	20030904
US 2004058934	A1	20040325	US 2003-655381	20030904
EP 1545532	A2	20050629	EP 2003-794573	20030904
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BR 2003014059	A	20050705	BR 2003-14059	20030904
US 2004127395	A1	20040701	US 2003-656385	20030905
PRIORITY APPLN. INFO.:				
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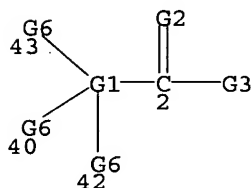
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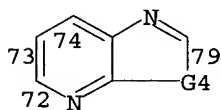
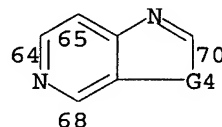
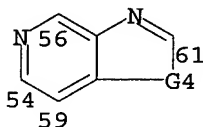
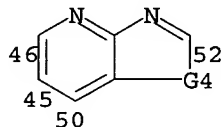
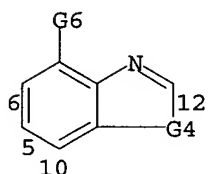
AB Title compds. I [B = C or up to one N; Y = O, S, NH, or alkyl substituted N; Z = O or S; R<sup>2</sup> independently = H, halo, alkyl, alkoxy, cycloalkyl, etc.; R<sup>8</sup> = H and R<sup>9</sup> = (un)substituted azabicyclo[3.2.1]oct-3-yl moiety; or R<sup>8</sup> and R<sup>9</sup> together form an (un)substituted dinitrogen heterocycle] are prepared and disclosed as histamine H4 receptor antagonists. Thus, e.g., II



was prepared by reaction of phenylenediamine with Me 2,2,2-trichloroacetimidate to provide intermediate 2-trichloromethyl-1H-benzimidazole which was treated with N-methylpiperazine followed by K<sub>2</sub>CO<sub>3</sub>. In binding assays to human histamine H<sub>4</sub> receptor, I possessed K<sub>i</sub> values of 11-8000 nM. I are useful to treat or prevent disorders and conditions mediated by the histamine H<sub>4</sub> receptor, including allergic rhinitis.

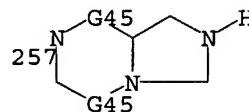
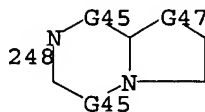
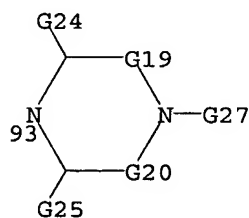
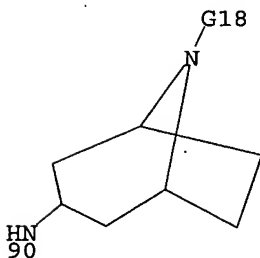
**MSTR 1**

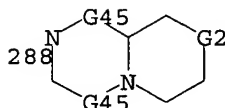
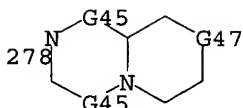
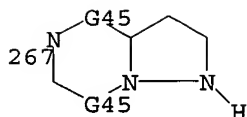
G1 = 12-2 6-43 5-40 10-42 / 52-2 46-43 45-40 50-42 /  
 61-2 56-43 54-40 59-42 / 70-2 65-43 64-40 68-42 /  
 79-2 74-43 73-40 72-42



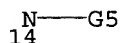
G2 = 0 / S

G3 = 90 / 93 / heterocycle <containing 8 or more atoms,  
 2-3 heteroatoms, 2 or more N, 0-1 O,  
 0-1 S (no other heteroatoms), 4 or more C, bicyclic, 5-,  
 6- or 7-membered rings only> (opt. substd. by (1-3) G21) /  
 (Specifically claimed: 248 / 257 / 267 / 278 / 288)



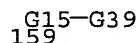
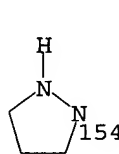
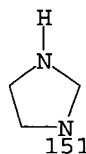
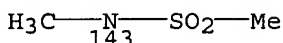
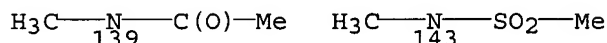
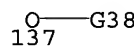
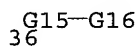
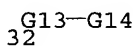
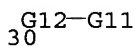
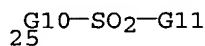
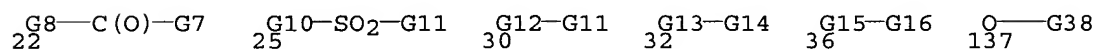


G4 = O / S / 14



G5 = H / alkyl <containing 1-4 C>

G6 = H / F / Cl / Br / I / **alkyl <containing 1-4 C>**  
 (opt. substd. by (1-3) G17) / alkoxy <containing 1-4 C> /  
 cycloalkyl <containing 3-6 C> (opt. substd. by (1-3) G17) /  
 cycloalkyloxy <containing 3-6 C> / OCH<sub>2</sub>Ph / CF<sub>3</sub> / OCF<sub>3</sub> /  
 SCF<sub>3</sub> / OH / 22 / 25 / 30 / NO<sub>2</sub> / NH<sub>2</sub> / 32 /  
 heterocycle <containing 4-7 atoms, 1-2 heteroatoms,  
 1 or more N, zero or more O, zero or more S (no other  
 heteroatoms), attached through 1-2 N, no OTHER>  
 (opt. substd. by (1) G9) / 36 / CN /  
 Ph (opt. substd. by (1-3) G17) / (Specifically claimed: Me /  
 Et / OMe / OEt / OPr-i / cyclopropyl / cyclobutyl /  
 cyclopentyl / cyclohexyl / 137 / COMe / COCH<sub>2</sub>Me / CO<sub>2</sub>Me /  
 CO<sub>2</sub>Et / NHCOMe / 139 / NHSO<sub>2</sub>Me / 143 / S(O)Me / SO<sub>2</sub>Me /  
 NHMe / NMe<sub>2</sub> / NEt<sub>2</sub> / pyrrolidino / 151 / 154 / piperidino /  
 piperazino / morpholino / thiomorpholino / 159)



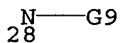
G7 = H / alkyl <containing 1-4 C> / OH / Ph / CH<sub>2</sub>Ph /  
 CH<sub>2</sub>CH<sub>2</sub>Ph / alkoxy <containing 1-6 C>

G8 = bond / NH / 23



G9 = alkyl <containing 1-4 C>

G10 = NH / 28



G11 = alkyl <containing 1-4 C>

G12 = S / S(O) / SO<sub>2</sub>

G13 = NH / 34

$\text{N} \text{---} \text{G14}$   
34

G14 = alkyl <containing 1-4 C> / Ph / CH<sub>2</sub>Ph / CH<sub>2</sub>CH<sub>2</sub>Ph

G15 = C(O) / SO<sub>2</sub>

G16 = NH<sub>2</sub> / 38 / heterocycle <containing 4-7 atoms,  
1-2 heteroatoms, 1 or more N, zero or more O,  
zero or more S (no other heteroatoms),  
attached through 1-2 N, no OTHER> (opt. substd. by (1) G9)

$\text{G13} \text{---} \text{G14}$   
38

G17 = alkyl <containing 1-3 C> / F / Cl / Br / I / OH /  
NH<sub>2</sub> / alkoxy <containing 1-3 C>

G18 = H / alkyl <containing 1-4 C> /  
(Specifically claimed: Me)

G19 = (1-2) 100

$\text{HC} \text{---} \text{G24}$   
100

G20 = (1-2) 110

$\text{HC} \text{---} \text{G25}$   
110

G21 = alkyl <containing 1-6 C> / F / Cl / Br / I / OH /  
NH<sub>2</sub> / alkoxy <containing 1-3 C>

G24 = H / alkyl <containing 1-4 C>  
(opt. substd. by (1-3) G31) / cycloalkyl <containing 3-6 C>  
(opt. substd.) / Ph (opt. substd.) / CN / CF<sub>3</sub> / 102 / 108 /  
(Specifically claimed: Me / Et / Pr-n / Pr-i / Bu-n / Bu-i /  
Bu-t / cyclopropyl / cyclopentyl / cyclohexyl / 173 / 175 /  
178 / CO<sub>2</sub>Me / CO<sub>2</sub>Et / 192 / 194 / 198)

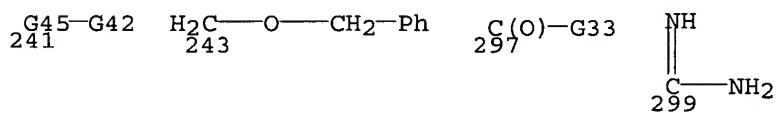
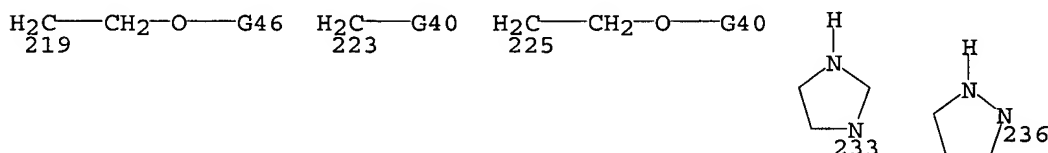
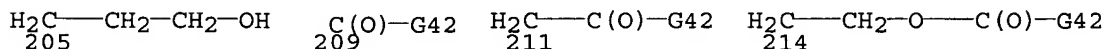
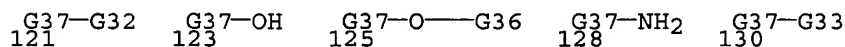
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102   108   173   175   178   192

$\text{H}_2\text{C} \text{---} \text{O} \text{---} \text{G43} \text{---} \text{H}$     $\text{H}_2\text{C} \text{---} \text{O} \text{---} \text{G44}$   
194   198

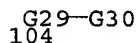
G25 = H / alkyl <containing 1-6 C> /  
(Specifically claimed: Me)

G27 = H / CN / 297 / 299 / alkyl <containing 1-10 C>  
(opt. substd. by (1-3) G17) / alkenyl <containing 2-8 C> /  
cycloalkyl <containing 3-8 C> (opt. substd. by (1-3) G17) /  
heterocycle <containing 4-7 atoms, 1-2 heteroatoms,  
zero or more N, zero or more O,  
zero or more S (no other heteroatoms)> (opt. substd. by G9) /

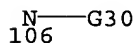
Ph (opt. substd. by (1-3) G17) / 121 / 123 / 125 / 128 / 130 / (Specifically claimed: CH<sub>2</sub>CH<sub>2</sub>OH / 205 / 209 / 211 / 214 / Me / Et / Pr-n / Pr-i / Bu-n / Bu-i / Bu-t / 219 / CH=CH<sub>2</sub> / CH<sub>2</sub>CH=CH<sub>2</sub> / cyclopropyl / cyclopentyl / cyclohexyl / 223 / 225 / 233 / 236 / pyrrolidino / piperidino / piperazino / morpholino / thiomorpholino / 241 / 243)



G28 = NH<sub>2</sub> / OH / 104 / heterocycle <containing 4-7 atoms, 1-2 heteroatoms, 1 or more N, zero or more O, zero or more S (no other heteroatoms), attached through 1-2 N, no OTHER> (opt. substd. by (1) G9)



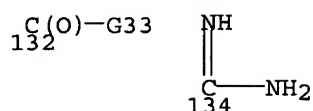
G29 = NH / O / 106



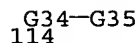
G30 = alkyl <containing 1-4 C> / cycloalkyl <containing 3-6 C> / Ph / alkyl <containing 1-2 C> (substd. by cycloalkyl <containing 3-6 C>) / CH<sub>2</sub>Ph / CH<sub>2</sub>CH<sub>2</sub>Ph

G31 = R / cycloalkyl <containing 3-6 C> (opt. substd.)

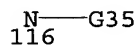
G32 = H / CN / 132 / 134 / alkyl <containing 1-10 C> (opt. substd. by (1-3) G17) / alkenyl <containing 2-8 C> / cycloalkyl <containing 3-8 C> (opt. substd. by (1-3) G17) / heterocycle <containing 4-7 atoms, 1-2 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms)> (opt. substd. by G9) / Ph (opt. substd. by (1-3) G17)



G33 = NH<sub>2</sub> / 114 / heterocycle <containing 4-7 atoms, 1-2 heteroatoms, 1 or more N, zero or more O, zero or more S (no other heteroatoms), attached through 1-2 N, no OTHER> (opt. substd. by (1) G9)

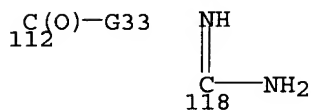


G34 = NH / 116



G35 = alkyl <containing 1-4 C> /  
alkenyl <containing 2-4 C> / cycloalkyl <containing 3-6 C> /  
Ph

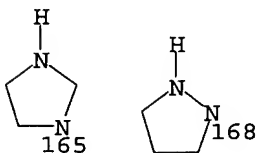
G36 = CN / 112 / 118 / alkyl <containing 1-10 C>  
(opt. substd. by (1-3) G17) / alkenyl <containing 2-8 C> /  
cycloalkyl <containing 3-8 C> (opt. substd. by (1-3) G17) /  
heterocycle <containing 4-7 atoms, 1-2 heteroatoms,  
zero or more N, zero or more O,  
zero or more S (no other heteroatoms)> (opt. substd. by G9) /  
Ph (opt. substd. by (1-3) G17)



G37 = alkylene <containing 1-8 C> /  
alkenylene <containing 2-8 C> / (Specifically claimed: G45)

G38 = cyclopentyl / cyclohexyl

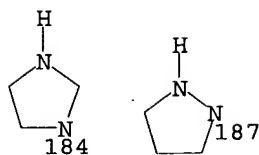
G39 = NMe<sub>2</sub> / NEt<sub>2</sub> / pyrrolidino / 165 / 168 / piperidino /  
piperazino / morpholino / thiomorpholino



G40 = cyclopropyl / cyclopentyl / cyclohexyl

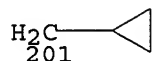
G41 = C(O) / CH<sub>2</sub>

G42 = pyrrolidino / 184 / 187 / piperidino / piperazino /  
morpholino / thiomorpholino



G43 = (1-3) CH2

G44 = Pr-i / Bu-n / Bu-i / Bu-t / Ph / CH2Ph / 201



G45 = (1-2) CH2

G46 = Me / Et / Pr-n / Pr-i / Bu-n / Bu-i / Bu-t

G47 = NH / CH2

Patent location:

claim 1

Note:

and pharmaceutically acceptable salts and esters

Note:

substitution is restricted

Stereochemistry:

and enantiomers and diastereomers

L29 ANSWER 5 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 140:247123 MARPAT

TITLE: Methods of bone healing with p38 MAP kinase inhibitors

INVENTOR(S): O'Connor, Patrick J.

PATENT ASSIGNEE(S): University of Medicine and Dentistry of New Jersey, USA

SOURCE: PCT Int. Appl., 102 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004024083	A2	20040325	WO 2003-US28601	20030910
WO 2004024083	A3	20040701		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

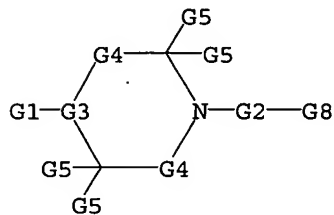
PRIORITY APPLN. INFO.: US 2002-409881P 20020911

AB The invention is directed to methods of bone healing by administering a p38 MAP kinase inhibitor. The invention is directed to methods of treating bone fractures, bone diseases, bone grafting, especially enhancing bone

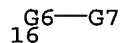
healing following facial reconstruction, maxillary reconstruction, mandibular reconstruction or tooth extraction, enhancing long bone extension, enhancing prosthetic ingrowth, and increasing bone synostosis by

administering a p38 MAP kinase inhibitor. Treatment of rats with a p38 MAP kinase inhibitor appeared to accelerate bone fracture healing.

# MSTR 2



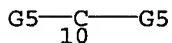
G1 = aryl (opt. substd.) / 16 /  
(Example: Ph (opt. substd.))



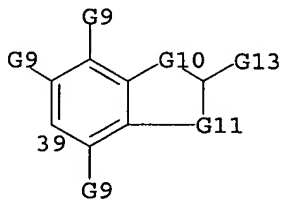
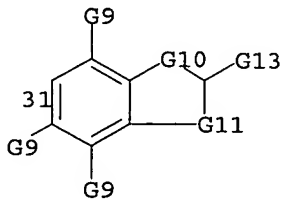
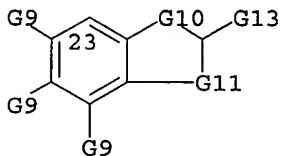
G2 = bond / R <"linking group"> / (Example: C(O))  
G3 = N / 18

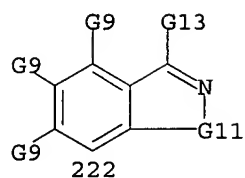
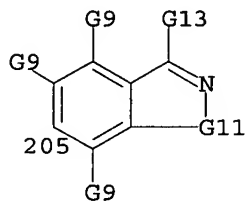
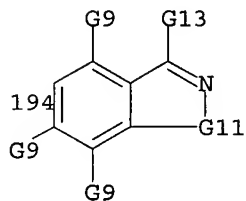
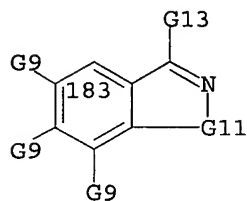
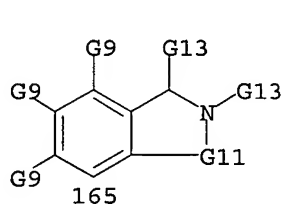
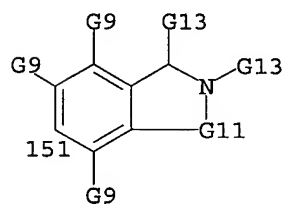
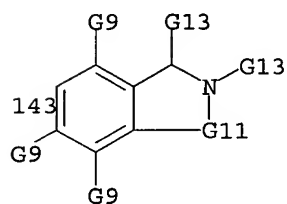
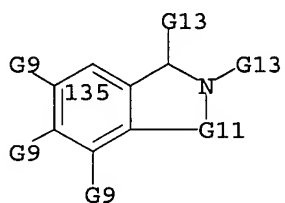
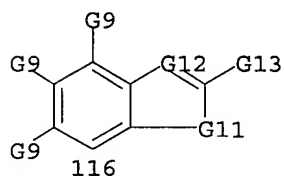
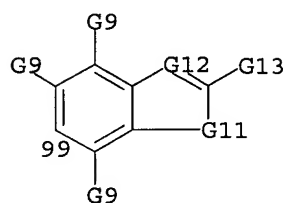
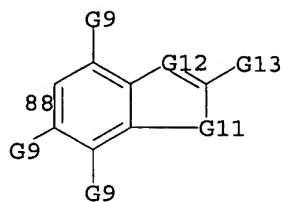
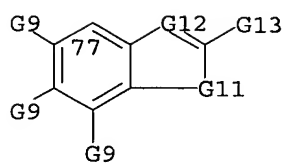
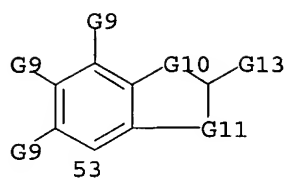


G4 = (0-2) 10

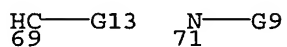


G5 = H / R  
G6 = R <"linking group"> / (Example: CH2)  
G7 = aryl (opt. substd.) / (Specifically claimed: Ph (opt. substd.))  
G8 = 23 / 31 / 39 / 53 / 77 / 88 / 99 / 116 / 135 / 143 /  
151 / 165 / 183 / 194 / 205 / 222

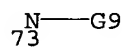




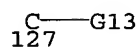
G9 = H / R  
G10 = 69 / 71



G11 = 0 / 73



G12 = N / 127





G13 = H / R / 246 / 250

$$\begin{array}{c} \text{C(O)-G14-C(O)-G15} \\ 246 \end{array} \quad \begin{array}{c} \text{C(O)-G14-G16} \\ 250 \end{array}$$

G14 = bond / R &lt;"linking group"&gt;

G15 = H / R

G16 = R &lt;"isostere"&gt;

Patent location: claim 3

Note: substitution is restricted

Note: or pharmaceutically acceptable salts

L29 ANSWER 6 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 140:235696 MARPAT

TITLE: Preparation of piperazinecarbonyl heterocyclic compounds as histamine H4 antagonists

INVENTOR(S): Cai, Hui; Carruthers, Nicholas I.; Dvorak, Curt A.; Edwards, James P.; Kwok, Annette K.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 19 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

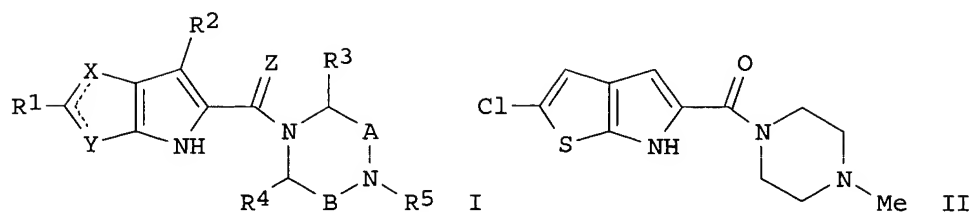
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

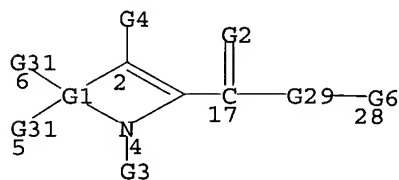
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004048878	A1	20040311	US 2003-656059	20030905
CA 2497868	AA	20040318	CA 2003-2497868	20030905
WO 2004022537	A2	20040318	WO 2003-US28017	20030905
WO 2004022537	A3	20040506		
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1543011	A2	20050622	EP 2003-754461	20030905
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRIORITY APPLN. INFO.:			US 2002-408723P	20020906
			WO 2003-US28017	20030905

GI

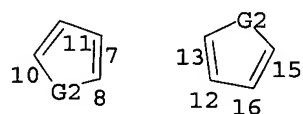


AB Thienopyrrolyl and furanopyrrolyl compds. of formula I [X, Y = CR<sub>6</sub>, O, S; Z = O, S; R<sub>1</sub>, R<sub>6</sub> = H, halo, alkyl, alkoxy, etc.; R<sub>2</sub> = H, halo, alkyl; R<sub>3</sub>, R<sub>4</sub> = H, alkyl, cycloalkyl, etc.; R<sub>5</sub> = H, CN, alkyl, etc.; A = (substituted) (CH<sub>2</sub>)<sub>m</sub>; B = (substituted) (CH<sub>2</sub>)<sub>n</sub>; m, n = 1-2; AR<sub>5</sub> = alkylene, heteroalkylene] are prepared which are useful to treat or prevent disorders and conditions mediated by the histamine H<sub>4</sub> receptor, including allergic rhinitis. Thus, II was prepared by annulation of thiophene-3-carboxaldehyde and Et azidoacetate, hydrolysis, reaction with N-chlorosuccinimide, then amidation with N-methylpiperazine. The K<sub>i</sub> value of II was 25 nM against human histamine H<sub>4</sub> receptor.

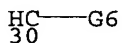
#### MSTR 1



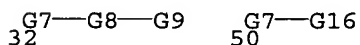
G1 = 10-5 11-6 7-2 8-4 / 13-6 12-5 16-4 15-2



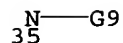
G2 = O / S  
 G3 = H / alkyl <containing 1-6 C>  
 G4 = H / F / Cl / Br / alkyl <containing 1-6 C>  
 G5 = bond / 30



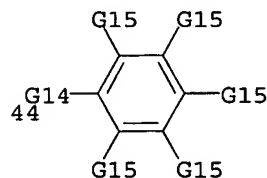
G6 = H / alkyl <containing 1-4 C>  
 (opt. substd. by 1 or more G10) /  
 cycloalkyl <containing 3-6 C> (opt. substd. by 1 or more G11)  
 / CN / CF<sub>3</sub> / 32 / 50 / (Example: Me)



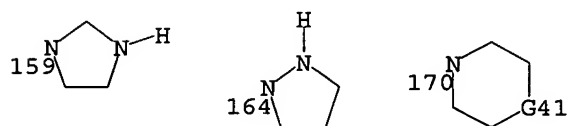
G7 = C(O) / CH2  
 G8 = 35 / O

N—G9  
 35

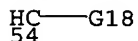
G9 = H / alkyl <containing 1-4 C>  
 (opt. substd. by (1-3) G39) / cycloalkyl <containing 3-6 C>  
 (opt. substd. by 1 or more G12) /  
 alkyl <containing 1-2 C> (substd. by 1 or more G13) / 44



G10 = alkyl <containing 1-3 C> / F / Cl / Br / I / OH /  
 NH2 / alkoxy <containing 1-3 C> /  
 cycloalkyl <containing 3-6 C> (opt. substd. by (1-3) G39)  
 G11 = alkyl <containing 1-4 C>  
 (opt. substd. by (1-3) G39) / F / Cl / Br / I / OH / NH2 /  
 alkoxy <containing 1-3 C>  
 G12 = alkyl <containing 1-3 C> / F / Cl / Br / I / OH /  
 NH2 / alkoxy <containing 1-3 C> /  
 alkyl <containing 1-2 C> (opt. substd. by (1-3) G39)  
 G13 = alkyl <containing 1-3 C> / F / Cl / Br / I / OH /  
 NH2 / alkoxy <containing 1-3 C> /  
 1 or more cycloalkyl <containing 3-6 C>  
 (opt. substd. by (1-3) G39)  
 G14 = (0-2) CH2  
 G15 = H / alkyl <containing 1-3 C> / F / Cl / Br / I /  
 OH / NH2 / alkoxy <containing 1-3 C>  
 G16 = heterocycle <containing 4-7 atoms, 1-2 heteroatoms,  
 1 or more N, 0-1 O, 0-1 S (no other heteroatoms),  
 attached through 1 or more N> (opt. substd. by G42) /  
 (Examples: 159 / 164 / 170)

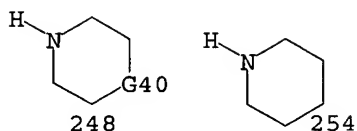
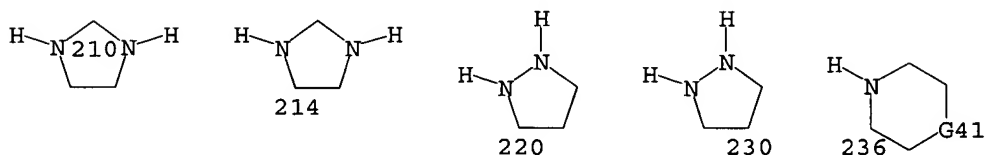
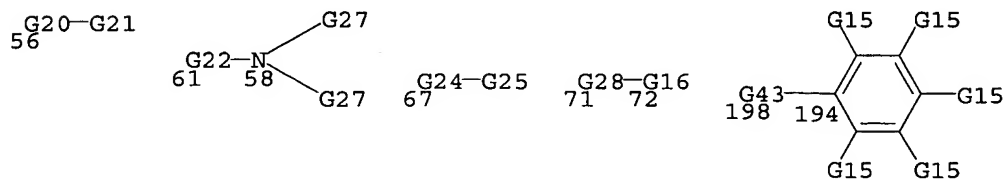


G17 = bond / 54

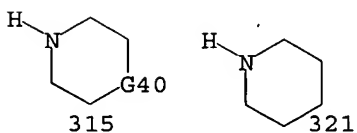
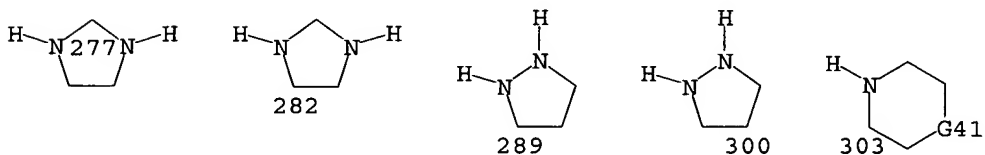
HC—G18  
 54

G18 = H / alkyl <containing 1-6 C> / (Example: Me)  
 G19 = H / CN / C(NH)NH2 / alkyl <containing 1-10 C>  
 (opt. substd. by (1-3) G39) / alkenyl <containing 2-8 C> /  
 cycloalkyl <containing 3-8 C> (opt. substd. by (1-3) G39) /  
 heterocycle <containing 4-7 atoms, 1-2 heteroatoms,

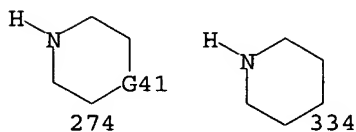
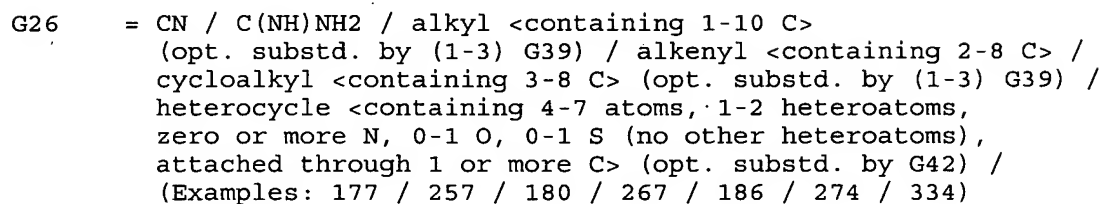
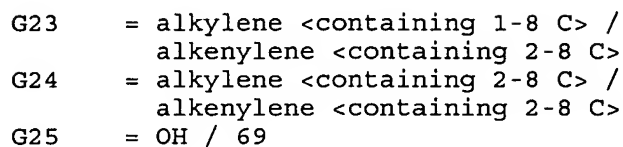
zero or more N, 0-1 O, 0-1 S (no other heteroatoms),  
 attached through 1 or more C> (opt. substd. by G42) / 56 /  
 67 / 61 / 71 / 198 / (Examples: 210 / 214 / 220 / 230 / 236  
 /  
 248 / 254)



G20 = alkylene <containing 1-8 C> /  
 alkenylene <containing 2-8 C>  
 G21 = H / CN / C(NH)NH2 / alkyl <containing 1-10 C>  
 (opt. substd. by (1-3) G39) / alkenyl <containing 2-8 C> /  
 cycloalkyl <containing 3-8 C> (opt. substd. by (1-3) G39) /  
 heterocycle <containing 4-7 atoms, 1-2 heteroatoms,  
 zero or more N, 0-1 O, 0-1 S (no other heteroatoms),  
 attached through 1 or more C> (opt. substd. by G42) /  
 (Examples: 277 / 282 / 289 / 300 / 303 / 315 / 321)

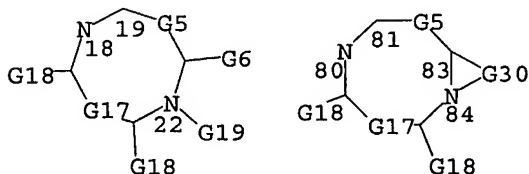
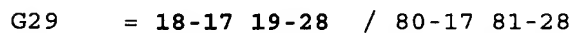


G22 = C(O) / 62-22 63-58 / 64-22 66-58 /  
 alkylene <containing 2-8 C> / alkenylene <containing 2-8 C>

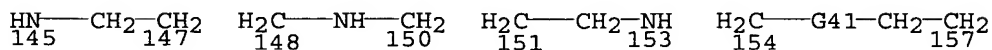


G27 = H / alkyl <containing 1-4 C>  
(opt. substd. by (1-3) G39) / alkenyl <containing 2-4 C> /  
cycloalkyl <containing 3-6 C> (opt. substd. by (1-3) G39) /  
Ph (opt. substd. by (1-3) G39)

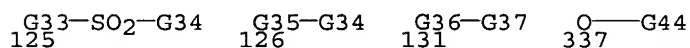
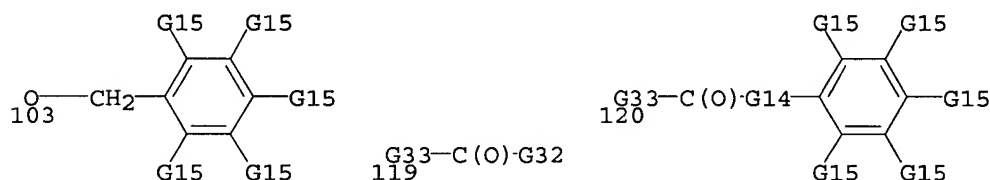
G28 = C(O) / 73-22 74-72 / 75-22 77-72 /  
alkylene <containing 2-8 C> / alkenylene <containing 2-8 C>



G30 = R <"moiety to complete a 5-7 membered ring"> /  
 (Examples: 145-83 147-84 / 148-83 150-84 / 151-83 153-84 /  
 154-83 157-84 )

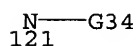


G31 = H / F / Cl / Br / I / alkyl <containing 1-4 C>  
 (opt. substd. by (1-3) G39) / 126 /  
 cycloalkyl <containing 3-6 C> (opt. substd. by (1-3) G39) /  
 cycloalkyloxy <containing 3-6 C>  
 (opt. substd. by (1-3) G39) / 103 / CF<sub>3</sub> / OCF<sub>3</sub> / SCF<sub>3</sub> / 119 /  
 120 / 125 / NO<sub>2</sub> / 131 / CN / Ph (opt. substd. by (1-3) G39) /  
 (Examples: Me / Et / 337 / cyclopropyl / cyclobutyl /  
 cyclopentyl / cyclohexyl)

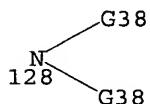


G32 = H / alkyl <containing 1-4 C>  
 (opt. substd. by (1-3) G39) / OH /  
 alkoxy <containing 1-6 C> (opt. substd. by (1-3) G39) /  
 (Examples: OMe / OEt / Me)

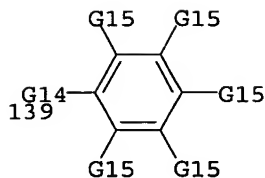
G33 = bond / 121



G34 = H / alkyl <containing 1-4 C>  
 (opt. substd. by (1-3) G39) / (Example: Me)  
 G35 = O / S / S(O)  
 G36 = SO<sub>2</sub> / C(O)  
 G37 = 128 / heterocycle <containing 4-7 atoms,  
 1-2 heteroatoms, 1 or more N, 0-1 O,  
 0-1 S (no other heteroatoms), attached through 1 or more N>  
 (opt. substd. by G34)



G38 = H / alkyl <containing 1-4 C>  
 (opt. substd. by (1-3) G39) / 139 / (Example: Me)



G39 = alkyl <containing 1-3 C> / F / Cl / Br / I / OH /  
 NH2 / alkoxy <containing 1-3 C>  
 G40 = bond / CH2 / O / S  
 G41 = bond / CH2 / NH / O / S  
 G42 = alkyl <containing 1-6 C>  
 (opt. substd. by (1-3) G39)  
 G43 = bond / **alkylene <containing 1-8 C>** /  
 alkenylene <containing 2-8 C> / 204-22 205-194

G24-O  
 204 205

G44 = Me / Et / Pr-i / cyclopentyl / cyclohexyl  
 Patent location: claim 1  
 Note: and pharmaceutically acceptable salts and esters  
 Note: substitution is restricted  
 Stereochemistry: and enantiomers and diastereomers

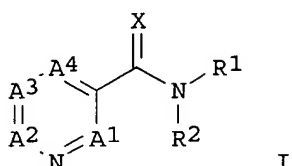
L29 ANSWER 7 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 139:323544 MARPAT  
 TITLE: Preparation of substituted pyridines having  
 antiangiogenic activity  
 INVENTOR(S): Haviv, Fortuna; Brandley, Michael F.; Henkin, Jack;  
 Dinges, Jurgen; Sauer, Daryl R.  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 22 pp., Cont.-in-part of U.S.  
 Ser. No. 116,971.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003195195	A1	20031016	US 2002-244987	20020917
US 2003195192	A1	20031016	US 2002-116971	20020405
US 2004014744	A1	20040122	US 2003-387367	20030312
CA 2481240	AA	20031023	CA 2003-2481240	20030403
WO 2003086398	A1	20031023	WO 2003-US11066	20030403

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
 CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
 GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,  
 LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,  
 PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,  
 TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
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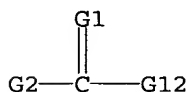
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 US 2002-244987 20020917  
 US 2003-387367 20030312  
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GI

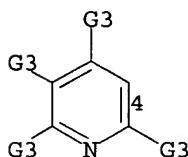


AB The title compds. [I; A1-A4 = N, CR3 (with the proviso that at least two of A1-A4 = CR3); NR1R2 = (un)substituted 5-8 membered ring containing an addnl. 0-2 heteroatoms selected from N, O, S; X = O, S, CH2] which are angiogenesis inhibitors, were prepared. Thus, treating 6-methylnicotinic acid in CH2Cl2 with SOCl2 followed by addition of 2-methylpyrrolidine and Et3N in CH2Cl2 afforded 2-methyl-5-[(2-methylpyrrolidin-1-yl)carbonyl]pyridine.HCl. The representative compds. I inhibited human endothelial cell migration in HMVEC assay by at least 45% when tested at a concentrate of 1 nM. Pharmaceutical composition comprising the compound I is claimed.

## MSTR 1



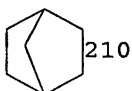
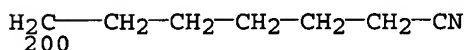
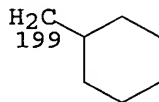
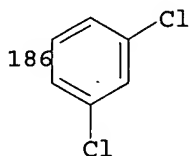
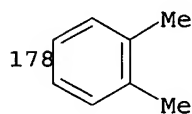
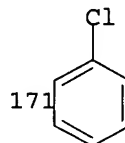
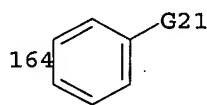
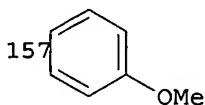
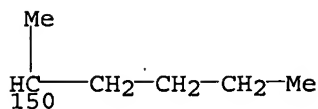
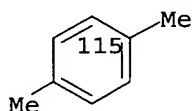
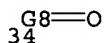
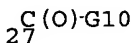
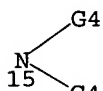
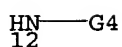
G1 = O / S / CH2  
 G2 = 4 / heterocycle <containing 1-3 heteroatoms,  
 1-3 N (no other heteroatoms), 3 or more C, aromatic,  
 6 normalized bonds, 6-membered monocyclic ring>  
 (opt. substd. by 1 or more G23)



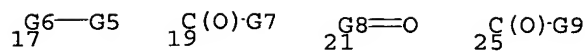
G3 = H / alkenyl <containing 2-12 C> /  
 alkoxy <containing 1-12 C> / alkyl <containing 1-12 C>  
 (substd. by alkoxy <containing 1-12 C>) /  
 alkoxycarbonyl <containing 1-12 C> /  
 alkyl <containing 1-12 C> / alkylcarbonyl <containing 1-12 C>  
 / alkylthio <containing 1-12 C> / NH2 / 12 / 15 / 27 /



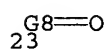
aryl <1-3 rings> (opt. substd.) /  
 alkyl <containing 1-12 C> (substd. by 1 or more G5) / CN /  
 alkyl <containing 1-12 C> (substd. by CN) /  
 cycloalkyl <containing 3-12 C, 1-3 rings> (opt. substd.) /  
 alkyl <containing 1-12 C> (substd. by G7) / F / Cl / Br / I /  
 alkyl <containing 1-12 C> (substd. by (1-4) G11) /  
 heterocycle <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings,  
 including 4-, 5-, 6- or 7-membered rings> (opt. substd.) /  
 34 / OH / alkyl <containing 1-12 C> (substd. by OH) / NO2 /  
 (Specifically claimed: Me / 115 / 150 / hexyl / Ph / 157 /  
 164 / 171 / 178 / 186 / 4-pyridyl / 3-furyl / 199 / 200 /  
 210 / 2-thienyl)



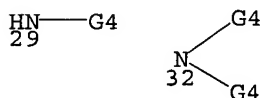
G4 = alkenyl <containing 2-12 C> /  
 alkyl <containing 1-12 C> (substd. by alkoxy <containing  
 1-12 C>) / alkoxy carbonyl <containing 1-12 C> /  
 alkyl <containing 1-12 C> / alkyl carbonyl <containing 1-12 C>  
 / aryl <1-3 rings> (opt. substd.) /  
 alkyl <containing 1-12 C> (substd. by 1 or more G5) / 17 /  
 cycloalkyl <containing 3-12 C, 1-3 rings> (opt. substd.) /  
 alkyl <containing 1-12 C> (substd. by G7) / 19 /  
 heterocycle <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings,  
 including 4-, 5-, 6- or 7-membered rings> (opt. substd.) /  
 21 / alkyl <containing 1-12 C> (substd. by G9) / 25 /  
 alkyl <containing 1-12 C> (substd. by OH) /  
 R <"protecting group">



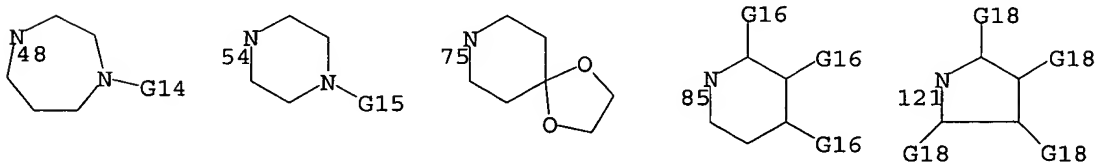
- G5 = aryl <1-3 rings> (opt. substd.)  
 G6 = C(O) / SO<sub>2</sub>  
 G7 = cycloalkyl <containing 3-12 C, 1-3 rings> (opt. substd.)  
 G8 = heterocycle <containing zero or more N, zero or more O, zero or more S (no other heteroatoms), 1-3 rings, including 4-, 5-, 6- or 7-membered rings> (opt. substd.)  
 G9 = heterocycle <containing zero or more N, zero or more O, zero or more S (no other heteroatoms), 1-3 rings, including 4-, 5-, 6- or 7-membered rings> (opt. substd.) / 23



- G10 = NH<sub>2</sub> / 29 / 32

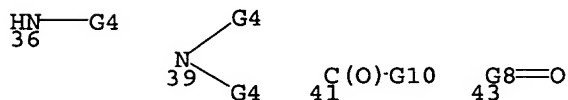


- G11 = F / Cl / Br / I  
 G12 = heterocycle <containing 5-8 atoms, 1-3 heteroatoms, 1 or more N, zero or more O, zero or more S (no other heteroatoms), attached through 1 or more N> (opt. substd. by (1-3) G13) / heterocycle <containing 7 or more atoms, 1 or more N, zero or more O, zero or more S (no other heteroatoms), attached through 1 or more N, 1 C fusion atom, bicyclic> (opt. substd. by (1-2) alkyl <containing 1-12 C>) / (Specifically claimed: 48 / thiomorpholino / 54 / piperidino (opt. substd. by (1) OH) / 75 / 85 / pyrrolidino (opt. substd. by (1-2) G20) / 121)



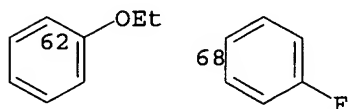
- G13 = alkyl <containing 1-12 C> (substd. by alkoxy <containing 1-12 C>) / alkoxycarbonyl <containing 1-12 C> / alkyl <containing 1-12 C> / NH<sub>2</sub> / 36 / 39 / 41 / aryl <1-3 rings> (opt. substd.) / alkoxycarbonyl <containing 1-12 C> (substd. by 1 or more G5) / alkyl <containing 1-12 C> (substd. by 1 or more G5) / CHO / alkyl <containing 1-12 C> (substd. by (1-4) G11) /

heterocycle <containing zero or more N, zero or more O,  
zero or more S (no other heteroatoms), 1-3 rings,  
including 4-, 5-, 6- or 7-membered rings> (opt. substd.) /  
43 / alkyl <containing 1-12 C> (substd. by G9) / OH /  
alkyl <containing 1-12 C> (substd. by OH)

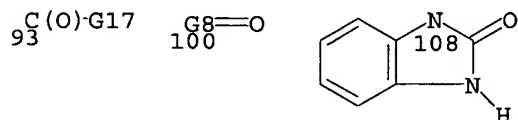


G14 = H / Me

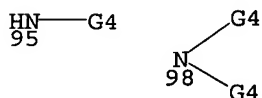
G15 = H / 2-pyridyl / 62 / Me / CH<sub>2</sub>Ph / 68



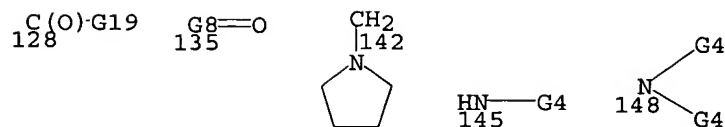
G16 = (1) H / 93 / alkyl <containing 1-12 C>  
(substd. by 1 or more G5) / heterocycle <containing zero or  
more N, zero or more O, zero or more S (no other heteroatoms)  
, 1-3 rings, including 4-, 5-, 6- or 7-membered rings>  
(opt. substd.) / 100 / CH<sub>2</sub>Ph / 108 /  
alkyl <containing 1-12 C> / Et / Pr-n / Me



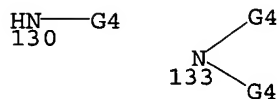
G17 = NH<sub>2</sub> / 95 / 98 / NEt<sub>2</sub>



G18 = (1) H / alkyl <containing 1-12 C>  
(substd. by alkoxy <containing 1-12 C>) / 128 /  
alkoxycarbonyl <containing 1-12 C>  
(substd. by 1 or more G5) / heterocycle <containing zero or  
more N, zero or more O, zero or more S (no other heteroatoms)  
, 1-3 rings, including 4-, 5-, 6- or 7-membered rings>  
(opt. substd.) / 135 / alkyl <containing 1-12 C>  
(substd. by G9) / alkyl <containing 1-12 C> (substd. by OH) /  
CH<sub>2</sub>OH / CH<sub>2</sub>OMe / 142 / CO<sub>2</sub>CH<sub>2</sub>Ph / 3-pyridyl / NH<sub>2</sub> / 145 /  
148 / Ph (opt. substd.) / aryl <2-3 rings> (opt. substd.) /  
alkyl <containing 1-12 C> (substd. by 1 or more G5) /  
CH<sub>2</sub>CH<sub>2</sub>Ph / Ph / NHCOMe / NMe<sub>2</sub> / CH<sub>2</sub>Ph



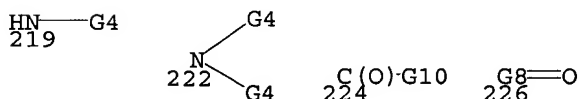
G19 = NH<sub>2</sub> / 130 / 133 / NH<sub>2</sub>t



G20 = alkyl <containing 1-12 C> / Me / Pr-i

G21 = Cl / CN / OEt

G23 = alkenyl <containing 2-12 C> /  
 alkoxy <containing 1-12 C> / alkyl <containing 1-12 C>  
 (substd. by alkoxy <containing 1-12 C>) /  
 alkoxycarbonyl <containing 1-12 C> /  
 alkyl <containing 1-12 C> / alkylcarbonyl <containing 1-12 C>  
 / alkylthio <containing 1-12 C> / NH<sub>2</sub> / 219 / 222 / 224 /  
 aryl <1-3 rings> (opt. substd.) /  
 alkyl <containing 1-12 C> (substd. by 1 or more G5) / CN /  
 alkyl <containing 1-12 C> (substd. by CN) /  
 cycloalkyl <containing 3-12 C, 1-3 rings> (opt. substd.) /  
 alkyl <containing 1-12 C> (substd. by G7) / F / Cl / Br / I /  
 alkyl <containing 1-12 C> (substd. by (1-4) G11) /  
 heterocycle <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings,  
 including 4-, 5-, 6- or 7-membered rings> (opt. substd.) /  
 226 / OH / alkyl <containing 1-12 C> (substd. by OH) / NO<sub>2</sub>



Patent location:

claim 1

Note:

or therapeutically acceptable salts

L29 ANSWER 8 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 139:323543 MARPAT

TITLE: Preparation of nicotinamides having antiangiogenic activity

INVENTOR(S): Haviv, Fortuna; Brandley, Michael F.; Henkin, Jack

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 16 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 2003195192	A1	20031016	US 2002-116971	20020405
US 2003195195	A1	20031016	US 2002-244987	20020917
US 2004014744	A1	20040122	US 2003-387367	20030312
CA 2481240	AA	20031023	CA 2003-2481240	20030403
WO 2003086398	A1	20031023	WO 2003-US11066	20030403

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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

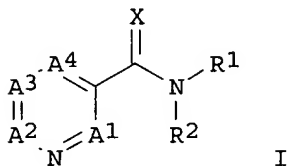
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PRIORITY APPLN. INFO.:

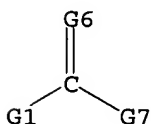
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US 2003-387367	20030312
WO 2003-US11066	20030403

GI

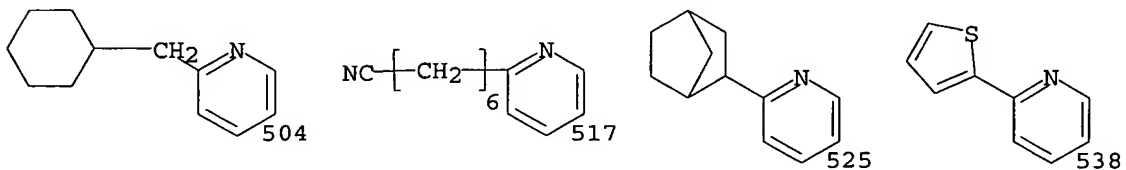
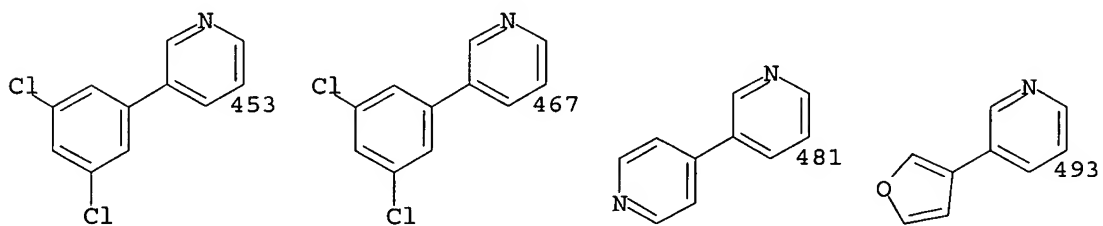
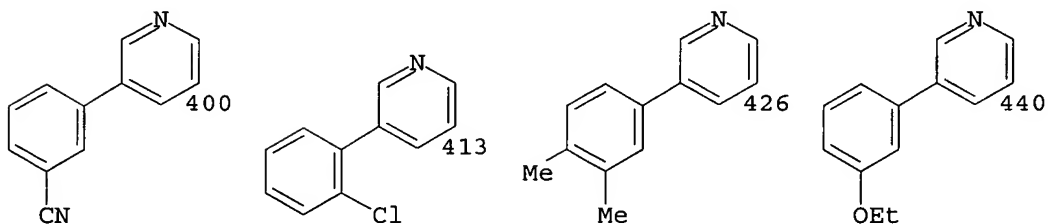
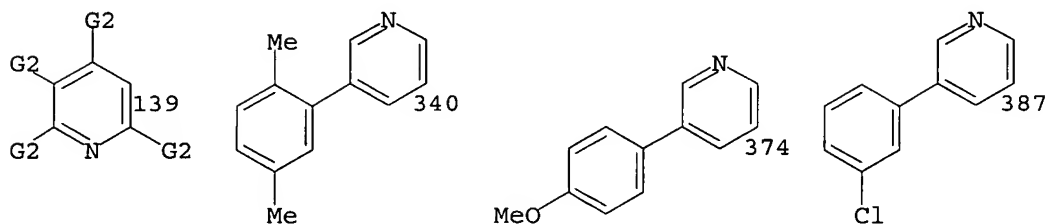
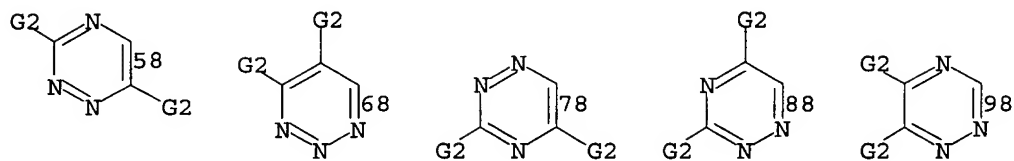
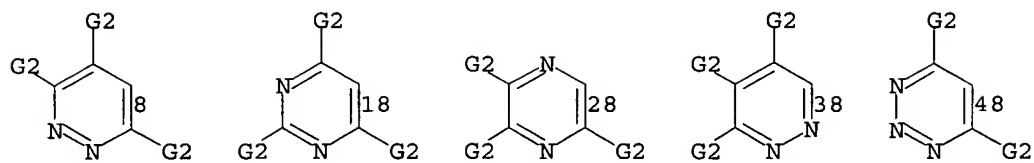


AB The title compds. [I; A1-A4 = N, CR3 (with the proviso that at least two of A1-A4 = CR3); NR1R2 = (un)substituted 5-8 membered ring containing an addnl. 0-2 heteroatoms selected from N, O, S; X = O, S, CH2] which are angiogenesis inhibitors, were prepared Thus, treating 6-methylnicotinic acid in CH2Cl2 with SOCl2 followed by addition of 2-methylpyrrolidine and Et3N in CH2Cl2 afforded 2-methyl-5-[(2-methylpyrrolidin-1-yl)carbonyl]pyridine.HCl. The exemplified compds. I inhibited human endothelial cell migration in HMVEC assay by at least 45% when tested at a concentrate of 1 nM. Pharmaceutical composition comprising the compound I is claimed.

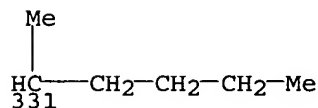
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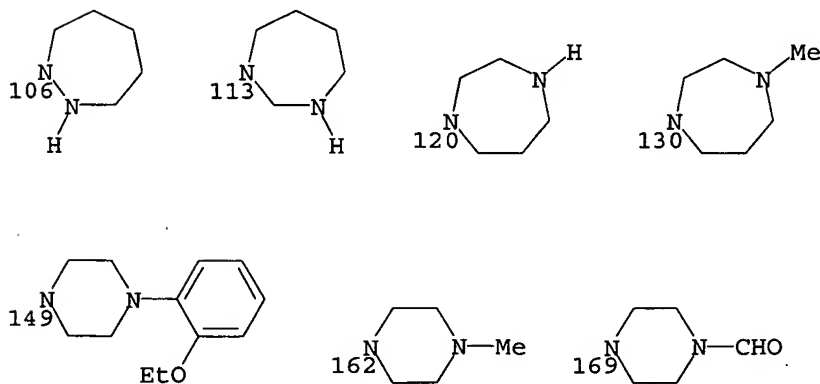
G1 = 139 / 8 / 18 / 28 / 38 / 48 / 58 / 68 / 78 / 88 / 98 / (Specifically claimed: 340 / 374 / 387 / 400 / 413 / 426 / 440 / 453 / 467 / 481 / 493 / 504 / 517 / 525 / 538)

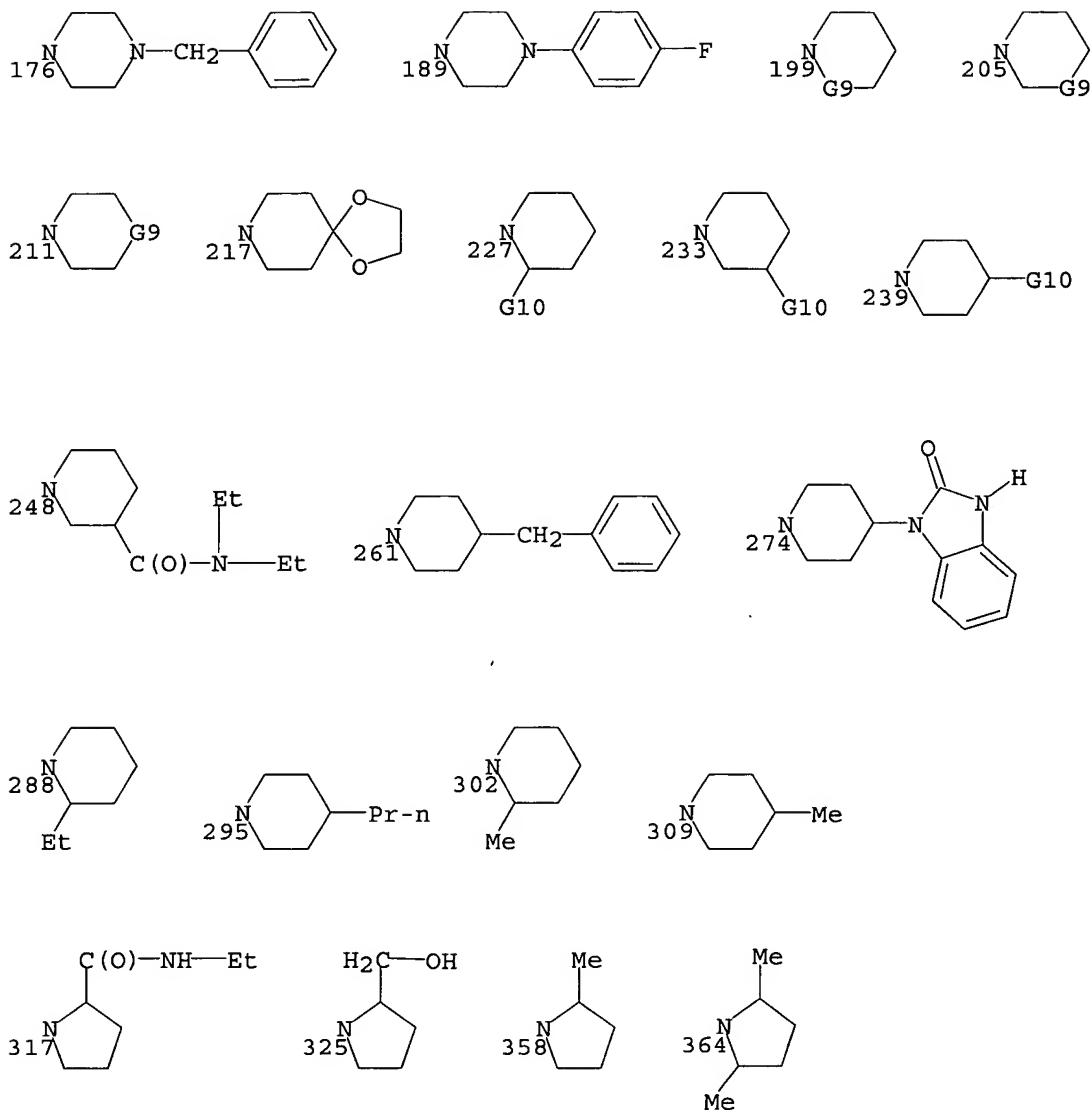


G2 = H / alkenyl <containing 2-12 C> /  
 alkoxy <containing 1-12 C> / alkyl <containing 1-12 C>  
 (substd. by alkoxy <containing 1-12 C>) /  
 alkoxycarbonyl <containing 1-12 C> /  
 alkyl <containing 1-12 C> / alkylcarbonyl <containing 1-12 C>  
 / alkylthio <containing 1-12 C> / NH<sub>2</sub> (opt. substd.) /  
 CONH<sub>2</sub> (opt. substd.) / Ph (opt. substd.) /  
 aryl <1-3 rings> (opt. substd.) /  
 alkyl <containing 1-12 C> (substd. by 1 or more G3) / CN /  
 alkyl <containing 1-12 C> (substd. by CN) /  
 cycloalkyl <containing 3-12 C, 1-3 rings> (opt. substd.) /  
 alkyl <containing 1-12 C> (substd. by G4) / F / Cl / Br / I /  
 alkyl <containing 1-12 C> (substd. by (1-4) G5) /  
 heterocycle <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.) / OH / **alkyl <containing 1-12 C>**  
**(substd. by OH)** / NO<sub>2</sub> / (Specifically claimed: Me / hexyl /  
 331)



G3 = Ph (opt. substd.) / aryl <1-3 rings> (opt. substd.)  
 G4 = cycloalkyl <containing 3-12 C, 1-3 rings>  
 (opt. substd.)  
 G5 = F / Cl / Br / I  
 G6 = O / S / CH<sub>2</sub>  
 G7 = heterocycle <containing 5-8 atoms, 1-3 heteroatoms,  
 1 or more N, up to 2 O, up to 2 S (no other heteroatoms),  
 attached through 1 or more N, 5- to 8-membered monocyclic  
 ring> (opt. substd. by (1-3) G8) /  
 (Specifically claimed: 106 / 113 / 120 / 130 /  
 thiomorpholino (opt. substd.) / 149 / 162 / 169 / **176** / 189  
 /  
 piperidino (opt. substd. by OH) / 199 / 205 / 211 / 217 /  
 227 / 233 / 239 / 248 / 261 / piperidino (substd. by alkyl  
 <containing 1-12 C>) / 274 / 288 / 295 / 302 / 309 /  
 pyrrolidino (opt. substd. by G11) / 317 / 325 / 358 / 364)





- G8 = alkoxy carbonyl <containing 1-12 C> /  
 alkyl <containing 1-12 C> / CONH2 (opt. substd.) /  
 Ph (opt. substd.) / aryl <1-3 rings> (opt. substd.) /  
 alkyl <containing 1-12 C> (substd. by 1 or more G3) / CHO /  
 alkyl <containing 1-12 C> (substd. by (1-4) G5) /  
 heterocycle <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.) / alkyl <containing 1-12 C>  
 (substd. by heterocycle <containing zero or more N,  
 zero or more O, zero or more S (no other heteroatoms),  
 1-3 rings> (opt. substd.)) / OH /  
 alkyl <containing 1-12 C> (substd. by OH) /  
 heterocycle <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), bicyclic>  
 (opt. substd. by (1-2) alkyl <containing 1-12 C>)
- G9 = heterocycle <containing zero or more N,  
 zero or more O, zero or more S (no other heteroatoms),  
 attached through 1 C> (opt. substd. by (1-2))



alkyl <containing 1-12 C>  
 G10 = CONH2 (opt. substd.) /  
 alkyl <containing 1-12 C> (substd. by 1 or more G3) /  
 heterocycle <containing zero or more N, zero or more O,  
 zero or more S (no other heteroatoms), 1-3 rings>  
 (opt. substd.)  
 G11 = R / CONH2 (opt. substd.) /  
 alkyl <containing 1-12 C> (substd. by OH) /  
 (up to 2) alkyl <containing 1-12 C>  
 Patent location: claim 1  
 Note: additional ring oxo formation also claimed

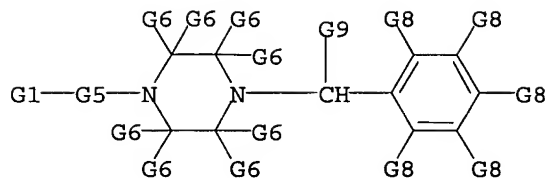
L29 ANSWER 9 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 139:312463 MARPAT  
 TITLE: New pharmaceutical compositions based on  
 anticholinergics and p38 kinase inhibitors  
 INVENTOR(S): Jung, Birgit; Pairet, Michel; Pieper, Michael P.;  
 Reiser, Hans Clemens  
 PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G.,  
 Germany; Boehringer Ingelheim Pharmaceuticals, Inc.  
 SOURCE: PCT Int. Appl., 191 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

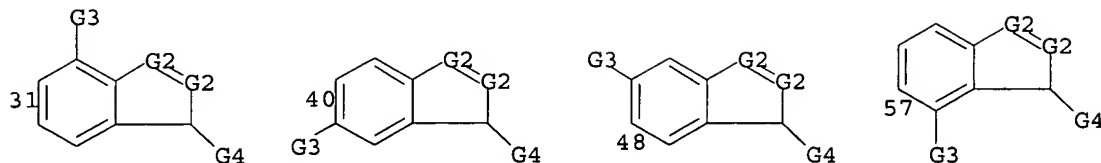
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RW:		GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG		
US 2003225089	A1	20031204	US 2003-408718	20030407
CA 2479522	AA	20031016	CA 2003-2479522	20030408
EP 1496900	A2	20050119	EP 2003-720433	20030408
R:		AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK		
BR 2003009099	A	20050329	BR 2003-9099	20030408
PRIORITY APPLN. INFO.:			US 2002-371514P	20020410
			WO 2003-EP3624	20030408

AB The present invention relates to novel pharmaceutical compns. based on anticholinergics and p38 kinase inhibitors, processes for preparing them and their use in the treatment of respiratory diseases. For example, inhalatable powders comprised tiotropium bromide (as anticholinergic) 10.8, N-[3-(1,1-dimethylethyl)-1-(4-methylphenyl)-1H-pyrazol-5-yl]-N'-[4-[2-(4-morpholinyl)ethoxy]-1-naphthalenyl]urea (as p38 kinase inhibitor) 3500, and lactose 3489.2 µg per capsule.

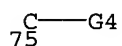
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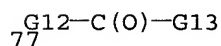
G1 = 31 / 40 / 48 / 57



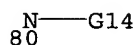
G2 = N / 75



G3 = H / F / Cl / Br / I / NO<sub>2</sub> /  
 alkyl <containing 1-6 C> / alkenyl <containing 2-6 C> / CN /  
 OH / SH / NH<sub>2</sub> / alkoxy <containing 1-6 C> /  
 alkylthio <containing 1-6 C> / alkylamino <containing 1-6 C> /  
 / dialkylamino <each alkyl containing 1-6 C> / CHO /  
 alkylcarbonyl <containing 1-6 C> / CO<sub>2</sub>H /  
 alkoxy carbonyl <containing 1-6 C> / CONH<sub>2</sub> /  
 alkylaminocarbonyl <containing 1-6 C> /  
 dialkylaminocarbonyl <each alkyl containing 1-6 C> / 77



G4 = H / alkyl <containing 1-6 C>  
 (opt. substd. by 1 or more G10)  
 G5 = C(O) / S(O) / CHOH / SO<sub>2</sub>  
 G6 = 6 or more H / alkyl (opt. substd. by 1 or more G7) /  
 aryl (opt. substd.)  
 G7 = R / aryl (opt. substd.)  
 G8 = H / R  
 G9 = H / Ph (opt. substd.)  
 G10 = R / OH (opt. substd.) / NH<sub>2</sub> (opt. substd.) /  
 SH (opt. substd.)  
 G12 = NH / 80 / O

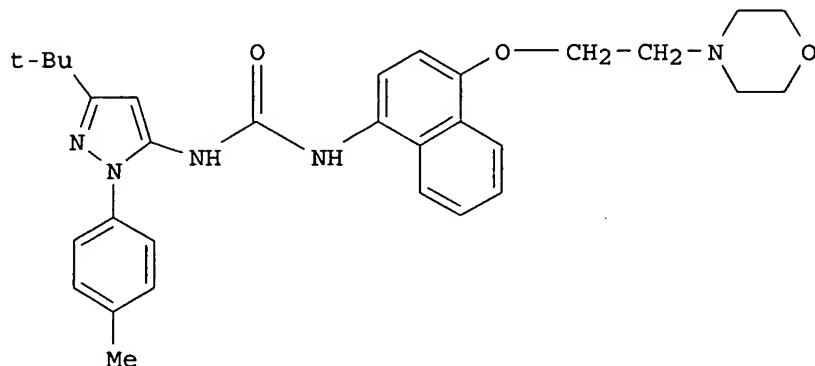


G13 = H / alkyl <containing 1-6 C>  
 G14 = alkyl <containing 1-6 C>  
 Patent location: claim 9

L29 ANSWER 10 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 139:312451 MARPAT  
 TITLE: Inhalant p38 kinase inhibitor formulations for  
 treating mucus hypersecretion  
 INVENTOR(S): Jung, Birgit  
 PATENT ASSIGNEE(S): Boehringer Ingelheim Pharma G.m.b.H. & Co. K.-G.,  
 Germany  
 SOURCE: PCT Int. Appl., 191 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003084503	A2	20031016	WO 2003-EP3434	20030402
WO 2003084503	A3	20040408		
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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			WO 2003-EP3434	20030402

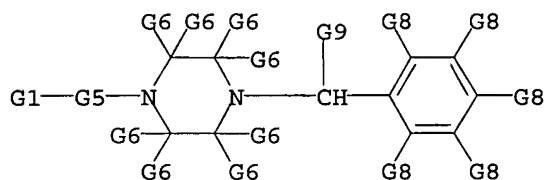
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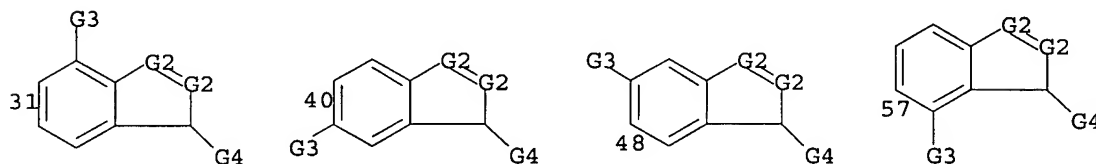
I

AB The invention relates to the use of p38 kinase inhibitors for the preparation of a pharmaceutical composition suitable for inhalation for the treatment of mucus hypersecretion. Furthermore the invention is directed to pharmaceutical compns. suitable for inhalation comprising p38 kinase inhibitors such as I and methods for their preparation

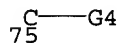
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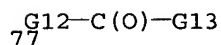
G1 = 31 / 40 / 48 / 57



G2 = N / 75



G3 = H / F / Cl / Br / I / NO<sub>2</sub> /  
alkyl <containing 1-6 C> / alkenyl <containing 2-6 C> / CN /  
OH / SH / NH<sub>2</sub> / alkoxy <containing 1-6 C> /  
alkylthio <containing 1-6 C> / alkylamino <containing 1-6 C> /  
dialkylamino <each alkyl containing 1-6 C> / CHO /  
alkylcarbonyl <containing 1-6 C> / CO<sub>2</sub>H /  
alkoxycarbonyl <containing 1-6 C> / CONH<sub>2</sub> /  
alkylaminocarbonyl <containing 1-6 C> /  
dialkylaminocarbonyl <each alkyl containing 1-6 C> / 77



G4 = H / alkyl <containing 1-6 C>  
(opt. substd. by 1 or more G10)  
G5 = C(O) / S(O) / CHOH / SO<sub>2</sub>  
G6 = 6 or more H / alkyl (opt. substd. by 1 or more G7) /  
aryl (opt. substd.)  
G7 = R / aryl (opt. substd.)  
G8 = H / R  
G9 = H / Ph (opt. substd.)  
G10 = R / OH (opt. substd.) / NH<sub>2</sub> (opt. substd.) /  
SH (opt. substd.)  
G12 = NH / 80 / O

N—G14  
80

G13 = H / alkyl <containing 1-6 C>

G14 = alkyl <containing 1-6 C>

Patent location: claim 7

L29 ANSWER 11 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 139:307794 MARPAT

TITLE: Preparation of N-hydroxy (piperazinesulfonyl)- or (piperazinecarbonyl)arylpropenamides as inhibitors of histone deacetylase and antiproliferative agents for the treatment of cancer and psoriasis

INVENTOR(S): Watkins, Clare J.; Romero-Martin, Maria-Rosario; Ritchie, James; Finn, Paul W.; Kalvinsh, Ivars; Loza, Einars; Dikovska, Klara; Starchenkov, Igor; Lolya, Daina; Gailite, Vjia

PATENT ASSIGNEE(S): Prolifix Limited, UK

SOURCE: PCT Int. Appl., 217 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

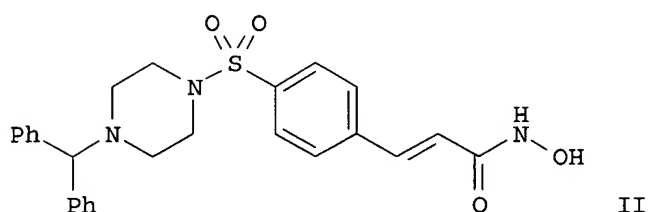
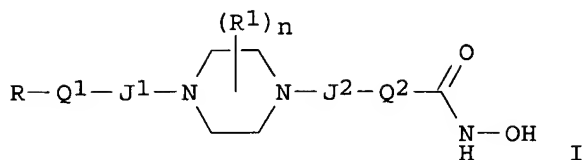
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

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RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2479906	AA	20031009	CA 2003-2479906	20030403
BR 2003008908	A	20050104	BR 2003-8908	20030403
EP 1492534	A1	20050105	EP 2003-722719	20030403
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
US 2005143385	A1	20050630	US 2003-509732	20030403
PRIORITY APPLN. INFO.:			US 2002-369337P	20020403
			WO 2003-GB1463	20030403

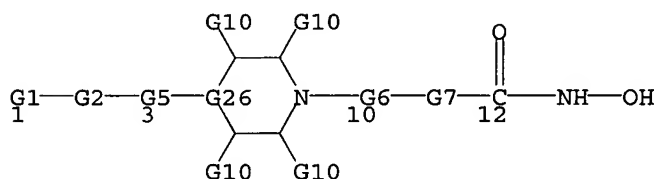
GI



AB N-hydroxyamides I [J1 = single bond, C(:O), J2 = C(:O), SO2; Q1 = single bond, OX, SX, XOY, XSY, XO, XS; Q2 = (un)substituted C4-C8 alkylene at least four carbon atoms in length; R = (un)substituted cycloalkyl, heterocycloalkyl, or aryl; R1 = C1-C4 alkyl; X, Y = (un)substituted alkanediyl; n = 0-8] containing piperazine moieties, particularly N-hydroxy piperazinesulfonylarylpropenamides such as II, are prepared as inhibitors of histone deacetylase (HDAC) for the treatment of proliferative diseases, cancer, and psoriasis in both humans and animals. Biol. data on the inhibition of HDAC in vitro, the inhibition of cellular proliferation in vitro, and the in vivo testing of I on mice containing i.p. P388 tumors are given for a subset of I. Most of the compds. I tested inhibit HDAC with IC50 values between 20 nM and 200 nM, inhibit proliferation of four cell lines with IC50 values between 1 μM and 10 μM, and give log rank statistics for mice with P388 tumors (5 each) of between -3 and -5. II gives a log rank statistic for tumors in five mice of -9.62. Preparative data for approx. fifty of the title compds. are given.

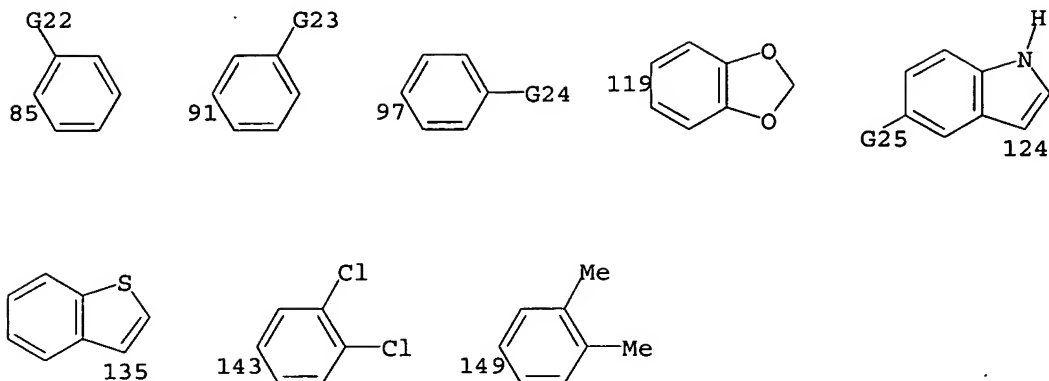
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

#### MSTR 1

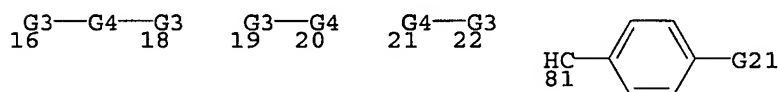


G1 = carbocycle <containing 3-20 C> (opt. substd.) / heterocycle <containing 3-20 atoms, 1-10 heteroatoms, zero or more N, zero or more O, zero or more S> (opt. substd.) / aryl <containing up to 20 C> (opt. substd.) / heterocycle <containing 5-20 atoms, zero or more N, zero or more O, zero or more S, aromatic, 2 or more double bonds, including 5- or 6-membered rings> (opt. substd.) / (Specifically claimed: 85 / 91 / 97 / 2-pyridyl / naphthyl / 2-pyrimidinyl / 119 / 124 / 135 /

143 / 149)



G2 = bond / carbon chain <containing 1-7 C>  
 (opt. substd. by 1 or more G17) /  
 carbocycle <containing 3-7 C> (opt. substd. by 1 or more G17)  
 / 16-1 18-3 / 19-1 20-3 / 21-1 22-3 /  
 (Specifically claimed: 81)



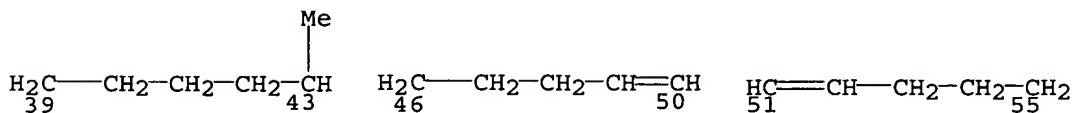
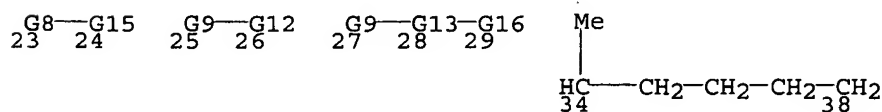
G3 = carbon chain <containing 1-7 C>  
 (opt. substd. by 1 or more G17) /  
 carbocycle <containing 3-7 C> (opt. substd. by 1 or more G17)

G4 = O / S

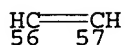
G5 = bond / C(O)

G6 = C(O) / SO2

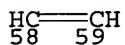
G7 = carbon chain <containing 4 or more C>  
 (opt. substd. by 1 or more G19) /  
 carbocycle <containing 4-8 C> (opt. substd. by 1 or more G20)  
 / arylene <containing up to 20 C>  
 (opt. substd. by 1 or more G20) /  
 heterocycle <containing 5-20 atoms, zero or more N,  
 zero or more O, zero or more S, aromatic,  
 2 or more double bonds, including 5- or 6-membered rings>  
 (opt. substd. by 1 or more G20) / 23-10 24-12 /  
 25-10 26-12 / 27-10 29-12 / (Specifically claimed: G11 /  
 34-10 38-12 / 39-10 43-12 / 46-10 50-12 / 51-10 55-12 )



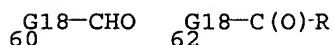
- G8 = arylene <containing up to 20 C>  
(opt. substd. by 1 or more G20) /  
heterocycle <containing 5-20 atoms, zero or more N,  
zero or more O, zero or more S, aromatic,  
2 or more double bonds, including 5- or 6-membered rings>  
(opt. substd. by 1 or more G20) /  
(Specifically claimed: phenylene)
- G9 = carbon chain <containing 1 or more C>  
(opt. substd. by 1 or more G19) /  
carbocycle <containing 3-7 C> (opt. substd.) /  
(Specifically claimed: G14)
- G10 = H / R / (Specifically claimed: carbon chain  
<containing 1-4 C> / carbocycle <containing 3-4 C> / Me)
- G11 = (5-8) CH<sub>2</sub>
- G12 = arylene <containing up to 20 C>  
(opt. substd. by 1 or more G20) /  
heterocycle <containing 5-20 atoms, zero or more N,  
zero or more O, zero or more S, aromatic,  
2 or more double bonds, including 5- or 6-membered rings>  
(opt. substd. by 1 or more G20) /  
(Specifically claimed: phenylene)
- G13 = arylene <containing up to 20 C>  
(opt. substd. by 1 or more G20) /  
heterocycle <containing 5-20 atoms, zero or more N,  
zero or more O, zero or more S, aromatic,  
2 or more double bonds, including 5- or 6-membered rings>  
(opt. substd. by 1 or more G20) /  
(Specifically claimed: phenylene)
- G14 = (1-2) CH<sub>2</sub>
- G15 = carbon chain <containing 1 or more C>  
(opt. substd. by 1 or more G19) /  
carbocycle <containing 3-7 C> (opt. substd.) /  
(Specifically claimed: G14 / 56-23 57-12 )



- G16 = carbon chain <containing 1 or more C>  
(opt. substd. by 1 or more G19) /  
carbocycle <containing 3-7 C> (opt. substd.) /  
(Specifically claimed: G14 / 58-28 59-12 )

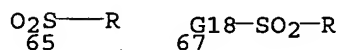


- G17 = R / (Specifically claimed: F / Cl / Br / I /  
OH (opt. substd.) / aryl <containing up to 20 C>  
(opt. substd.) / heterocycle <containing 5-20 atoms,  
zero or more N, zero or more O, zero or more S, aromatic,  
2 or more double bonds, including 5- or 6-membered rings>  
(opt. substd.) / acyl / NH<sub>2</sub> (opt. substd.) /  
CONH<sub>2</sub> (opt. substd.) / 60 / 62)

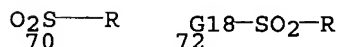




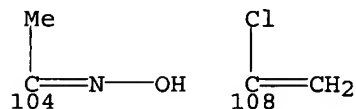
G18 = NH (opt. substd.)  
 G19 = R / (Specifically claimed: CO<sub>2</sub>H (opt. substd.) /  
 CONH<sub>2</sub> (opt. substd.) / acyl / F / Cl / Br / I /  
 OH (opt. substd.) / aryl <containing up to 20 C>  
 (opt. substd.) / heterocycle <containing 5-20 atoms,  
 zero or more N, zero or more O, zero or more S, aromatic,  
 2 or more double bonds, including 5- or 6-membered rings>  
 (opt. substd.) / 65 / 67 / NH<sub>2</sub> (opt. substd.) / morpholino /  
 NO<sub>2</sub> / CN)



G20 = R / (Specifically claimed: CO<sub>2</sub>H (opt. substd.) /  
 CONH<sub>2</sub> (opt. substd.) / acyl / F / Cl / Br / I /  
 OH (opt. substd.) / carbon chain <containing 1-7 C>  
 (opt. substd.) / carbocycle <containing 3-7 C>  
 (opt. substd.) / aryl <containing up to 20 C>  
 (opt. substd.) / heterocycle <containing 5-20 atoms,  
 zero or more N, zero or more O, zero or more S, aromatic,  
 2 or more double bonds, including 5- or 6-membered rings>  
 (opt. substd.) / 70 / 72 / NH<sub>2</sub> (opt. substd.) / morpholino /  
 NO<sub>2</sub> / CN)



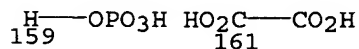
G21 = H / F  
 G22 = H / OMe / Cl / F  
 G23 = Cl / OMe / F / CF<sub>3</sub> / Me / NO<sub>2</sub>  
 G24 = NMe<sub>2</sub> / CN / OMe / NO<sub>2</sub> / F / 104 / 108 / Cl



G25 = H / OMe  
 G26 = N / 157

N ● G27  
 157

G27 = R <"pharmaceutically acceptable salt"> /  
 (Specifically claimed: 159 / 161)



Patent location: claim 1  
 Note: or derivatives

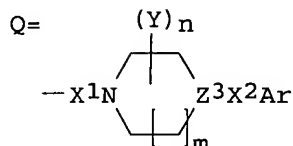
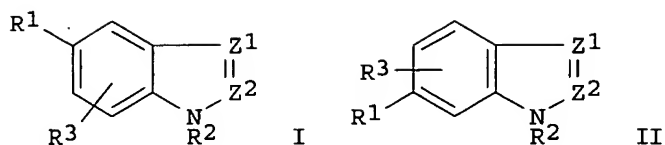
L29 ANSWER 12 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 139:85357 MARPAT  
 TITLE: Preparation of indoles, benzimidazoles and benzotriazoles for treating cardiac failure and other disorders  
 INVENTOR(S): Mavunkel, Babu J.; Liu, David Y.; Schreiner, George F.; Lewicki, John A.; Perumattam, John J.  
 PATENT ASSIGNEE(S): Scios, Inc., USA  
 SOURCE: U.S., 38 pp., Cont.-in-part of U.S. Ser. No. 275,176.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 7  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6589954	B1	20030708	US 1999-316761	19990521
US 6130235	A	20001010	US 1998-128137	19980803
US 6340685	B1	20020122	US 1999-275176	19990324
WO 2000059904	A2	20001012	WO 2000-US7934	20000324
WO 2000059904	A3	20010111		
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RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
US 6448257	B1	20020910	US 2000-535316	20000324
CA 2372567	AA	20001130	CA 2000-2372567	20000519
WO 2000071535	A1	20001130	WO 2000-US14003	20000519
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
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NZ 515285	A	20040130	NZ 2000-515285	20000519
AU 772295	B2	20040422	AU 2000-54424	20000519
US 6867209	B1	20050315	US 2000-575060	20000519
BG 106091	A	20020628	BG 2001-106091	20011108
HR 2001000854	A1	20030430	HR 2001-854	20011119
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PRIORITY APPLN. INFO.:			US 1998-86531P	19980522
			US 1998-128137	19980803
			US 1999-275176	19990324
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WO 2000-US14003 20000519

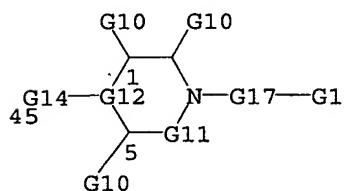
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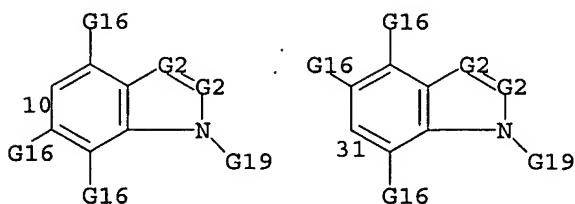
AB The title compds. I and II [Z1, Z2 = CR<sub>4</sub>, N; R<sub>4</sub> = H, alkyl, aryl, each of said alkyl or aryl optionally including one or more heteroatoms selected from O, S and N and optionally substituted by one or more of halo, OR, SR, NR<sub>2</sub>, RCO, CO<sub>2</sub>R, CONR<sub>2</sub>, O<sub>2</sub>CR, NROCR, etc. and R = H, alkyl; R<sub>1</sub> = Q and X<sub>1</sub> = CO, SO, SO<sub>2</sub>, CHOH; m = 1; Y = alkyl, aryl, arylalkyl; YY = alkylene bridge; n = 0-2; Z<sub>3</sub> = N; X<sub>2</sub> = CH, CH<sub>2</sub> or an isostere; Ar = one or two Ph moieties directly coupled to X<sub>2</sub> optionally substituted by halo, nitro, alkyl, etc.; R<sub>2</sub> = H, alkyl, aryl; R<sub>3</sub> = H, halo, NO<sub>2</sub>, alkyl, alkenyl, etc.], useful as selective inhibitors of p38 $\alpha$  kinase, were prepared Thus, amidation of benzimidazole-5-carboxylic acid with 4-benzylpiperidine in the presence of EDAC and DMAP in DMF afforded 47% 4-benzylpiperidinyl-benzimidazole-5-carboxamide which showed 85% inhibition of p38 $\beta$  at 50  $\mu$ M. The compds. I were tested for their specificity for p38 $\alpha$  as compared to p38 $\beta$  (data given).

REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

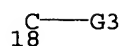
MSTR 1



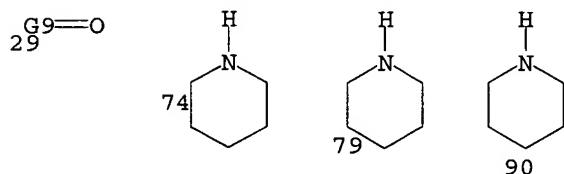
G1 = 10 / 31



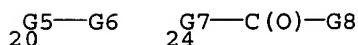
G2 = N / 18



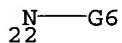
G3 = H / alkyl <containing 1-6 C>  
 (opt. substd. by 1 or more G4) /  
 aryl (opt. substd. by 1 or more G4) /  
 heteroaryl <containing zero or more O, zero or more S,  
 zero or more N (no other heteroatoms)>  
 (opt. substd. by 1 or more G4) / 29 /  
 (Specifically claimed: pyridyl / 74 / 79 / 90)



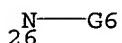
G4 = halo / OH / SH / NH<sub>2</sub> / CHO / CO<sub>2</sub>H / 20 /  
 alkylcarbonyl <containing 1-6 C> /  
 alkoxy carbonyl <containing 1-6 C> / CONH<sub>2</sub> /  
 alkylaminocarbonyl <containing 1-6 C> /  
 dialkylaminocarbonyl <each alkyl containing 1-6 C> / OCHO /  
 alkylcarbonyloxy <containing 1-6 C> / 24 / CN /  
 carbon chain <containing 1 or more C> /  
 carbocycle <non-aromatic> / heterocycle <containing 5-6  
 atoms, 1-2 heteroatoms> / aryl <containing 6 C> /  
 heteroaryl <containing 1-2 heteroatoms>



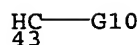
G5 = O / S / NH / 22



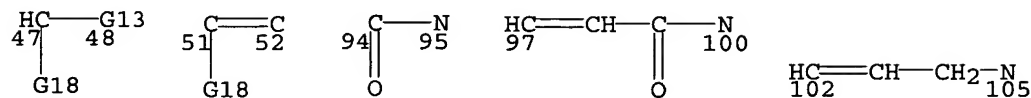
G6 = alkyl <containing 1-6 C>  
 G7 = NH / 26



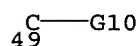
G8 = H / alkyl <containing 1-6 C>  
 G9 = carbon chain <containing 1-6 C, saturated>  
 (opt. substd.) / carbocycle <aromatic> (opt. substd.) /  
 heterocycle <containing zero or more O, zero or more S,  
 zero or more N (no other heteroatoms), aromatic>  
 (opt. substd.)  
 G10 = H / alkyl (opt. substd.) / aryl (opt. substd.) /  
 aralkyl (opt. substd.)  
 G11 = bond / 43



G12 = 48-1 47-45 48-5 / 52-1 51-45 52-5 /  
(Examples: 95-1 94-45 95-5 / 100-1 97-45 100-5 /  
105-1 102-45 105-5 )

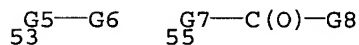


G13 = N / 49

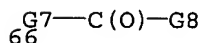


G14 = Ph (opt. substd. by 1 or more G15)

G15 = halo / NO<sub>2</sub> / alkyl <containing 1-6 C> /  
alkenyl <containing 2-6 C> / alkynyl <containing 2-6 C> /  
CN / CF<sub>3</sub> / CHO / CO<sub>2</sub>H / NH<sub>2</sub> / OH / SH / 53 / 55 /  
alkylcarbonyloxy <containing 1-6 C> /  
alkylcarbonyl <containing 1-6 C> /  
alkoxycarbonyl <containing 1-6 C> /  
alkylaminocarbonyl <containing 1-6 C> /  
dialkylaminocarbonyl <each alkyl containing 1-6 C> /  
(Examples: F / Cl / CH<sub>2</sub>CO<sub>2</sub>H / OMe / OCF<sub>3</sub> / Me / SMe / NEt<sub>2</sub> /  
Ph / OPh)

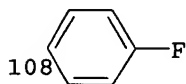


G16 = H / halo / NO<sub>2</sub> / alkyl <containing 1-6 C> /  
alkenyl <containing 2-6 C> / alkynyl <containing 2-6 C> /  
CN / OH / SH / NH<sub>2</sub> / CHO / CO<sub>2</sub>H /  
alkylcarbonyl <containing 1-6 C> /  
alkoxycarbonyl <containing 1-6 C> / CONH<sub>2</sub> /  
alkylaminocarbonyl <containing 1-6 C> /  
dialkylaminocarbonyl <each alkyl containing 1-6 C> / OCHO /  
alkylcarbonyloxy <containing 1-6 C> / 66



G17 = C(O) / S(O) / SO<sub>2</sub> / CHOH

G18 = H / Ph (opt. substd.) / (Example: 108)



G19 = H / alkyl <containing 1-6 C>

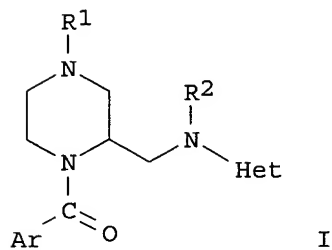
(opt. substd. by 1 or more G4) /  
 aryl (opt. substd. by 1 or more G4) /  
 heteroaryl <containing zero or more O, zero or more S,  
 zero or more N (no other heteroatoms)>  
 (opt. substd. by 1 or more G4) / 71 / (Examples: Pr-i /  
 CH<sub>2</sub>Ph / Et / Me)

<sup>G9=O</sup>  
 71

Patent location: claim 1  
 Note: and pharmaceutically acceptable salts or isosteres  
 Note: additional ring formation also claimed  
 Note: also incorporates broader disclosure  
 Note: substitution is restricted

L29 ANSWER 13 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 139:69288 MARPAT  
 TITLE: Preparation of piperazine derivatives as orexin  
 receptor antagonists  
 INVENTOR(S): Branch, Clive Leslie; Coulton, Steven; Nash, David  
 John; Porter, Roderick Alan  
 PATENT ASSIGNEE(S): Smithkline Beecham PLC, UK  
 SOURCE: PCT Int. Appl., 24 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

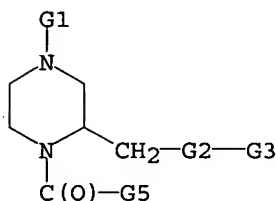
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WO 2003051873	A1	20030626	WO 2002-GB5676	20021213
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PRIORITY APPLN. INFO.:			GB 2001-30393	20011219
GI				



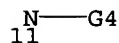
AB Piperazine derivs. [I; R1, R2 = H, C1-6 alkyl; Het = (un)substituted 5- or 6-membered or bicyclic heteroaryl containing ≤3 N, O, S atoms; Ar = (un)substituted Ph, (un)substituted 5- or 6-membered or bicyclic heteroaryl] or their pharmaceutically acceptable salts, nonpeptide antagonists of human orexin receptors, were prepared. For example, dissolving 0.10 g (6,7-difluoro-2-quinoxaliny)- (4-methyl-2-piperazinylmethyl)amine (preparation given) in 2 mL DMF, adding 0.136 g HATU, 0.190 mL (Me<sub>2</sub>CH)<sub>2</sub>NEt and 0.103 g 5-(4-fluorophenyl)-2-methylthiazole-4-carboxylic acid and shaking the mixture for 16 h gave 0.12 g 1-[2-[(6,7-difluoro-2-quinoxaliny)amino)methyl]-4-methyl-1-piperazinyl]-1-[5-(4-fluorophenyl)-2-methyl-4-thiazolyl]methanone. The exemplified compds. I showed pK<sub>b</sub> values 6.4-7.4 at the human cloned orexin-1 receptor, and pK<sub>b</sub> values <6.6 to 7.4 at the human cloned orexin-2 receptor.

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

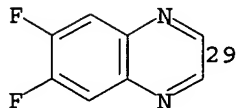
## MSTR 1



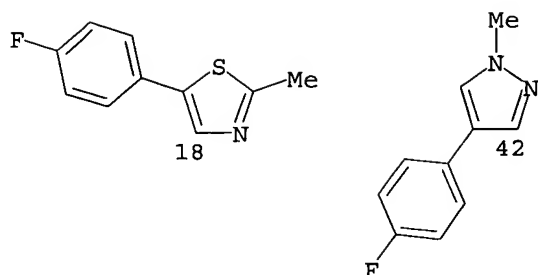
G1 = H / alkyl <containing 1-6 C>  
(opt. substd. by 1 or more G6) / (Specifically claimed: Me)  
G2 = NH / 11



G3 = heteroaryl <containing 1-3 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms), mono- or bicyclic> (opt. substd. by 1 or more G11) / (Specifically claimed: pyridyl / pyrimidinyl / quinoxaliny / 29)



G4 = alkyl <containing 1-6 C> (opt. substd. by 1 or more G6) / (Example: Me)  
G5 = Ph (opt. substd. by 1 or more G7) / heteroaryl <containing 1-3 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms), mono- or bicyclic> (opt. substd. by 1 or more G7) / aryl <bicyclic> (opt. substd. by 1 or more G7) / (Specifically claimed: thiazolyl (opt. substd. by 1 or more G7) / pyrazolyl (opt. substd. by 1 or more G7) / 18 / 42)



- G6 = R / (Specifically claimed: alkoxy <containing 1-4 C> (opt. substd.) / F / Cl / Br / I / alkyl <containing 1-6 C> (opt. substd.) / Ph (opt. substd.) / heteroaryl <containing 1-3 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms), monocyclic> (opt. substd.))
- G7 = R / (Specifically claimed: alkoxy <containing 1-4 C> (opt. substd.) / F / Cl / Br / I / alkyl <containing 1-6 C> (opt. substd.) / Ph (opt. substd.) / heterocycle <containing 5-6 atoms, 1-3 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms), 5- to 6-membered monocyclic ring> (opt. substd.)) / (Examples: CN / alkyl <containing 1-4 C> (substd. by OH) / alkyl <containing 1-4 C> (substd. by alkoxy <containing 1-4 C>))
- G8 = H / R / carbon chain <containing 1-4 C> / NH<sub>2</sub> / alkylamino <containing 1-4 C> / dialkylamino <each alkyl containing 1-4 C> / heterocycle <containing 1 or more N (no other heteroatoms), 2-6 C, attached through 1 N> / 66

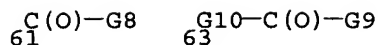
<sup>G14=O</sup><sub>66</sub>

- G9 = NH<sub>2</sub> / alkylamino <containing 1-4 C> / dialkylamino <each alkyl containing 1-4 C> / heterocycle <containing 1 or more N (no other heteroatoms), 2-6 C, attached through 1 N> / 68

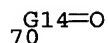
<sup>G14=O</sup><sub>68</sub>

- G10 = alkylene <containing 1-4 C, unbranched>
- G11 = R / (Specifically claimed: alkoxy <containing 1-4 C> (opt. substd.) / F / Cl / Br / I / alkyl <containing 1-6 C> (opt. substd.) / Ph (opt. substd.) / heteroaryl <containing 1-3 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms), monocyclic> (opt. substd. by G13)) / (Examples: CN / alkyl <containing 1-4 C> (substd. by OH) / alkyl <containing 1-4 C> (substd. by alkoxy <containing 1-4 C>) / 61 / 63 / Ph (opt. substd. by 1 or more G12))





G12 = F / Cl / Br / I / CN / CHO /  
 alkylcarbonyl <containing 1-4 C> /  
 alkylsulfonyl <containing 1-4 C> /  
 G13 = R / (Examples: alkyl <containing 1-2 C> / NH<sub>2</sub> /  
 alkylamino <containing 1-4 C> /  
 dialkylamino <each alkyl containing 1-4 C> /  
 heterocycle <containing 1 or more N (no other heteroatoms),  
 2-6 C, attached through 1 N> / 70)

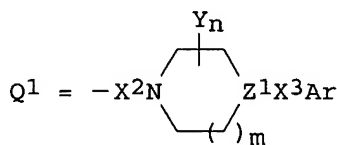
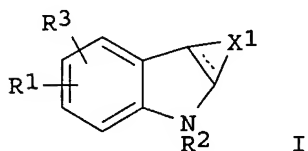


G14 = heterocycle <containing 1 or more N (no other  
 heteroatoms), 2-6 C, attached through 1 N, 1 C>  
 Patent location: claim 1  
 Note: or pharmaceutically acceptable salts

L29 ANSWER 14 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 137:216937 MARPAT  
 TITLE: Preparation of benzylpiperidinylcarbonylcarbolines as  
 p38 $\alpha$  kinase inhibitors.  
 INVENTOR(S): Mavunkel, Babu J.; Liu, David Y.; Schreiner, George  
 F.; Lewicki, John A.  
 PATENT ASSIGNEE(S): Scios, Inc., USA  
 SOURCE: U.S., 14 pp., Cont.-in-part of U.S. Ser. No. 316,761.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 7  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6448257	B1	20020910	US 2000-535316	20000324
US 6130235	A	20001010	US 1998-128137	19980803
US 6340685	B1	20020122	US 1999-275176	19990324
US 6589954	B1	20030708	US 1999-316761	19990521
PRIORITY APPLN. INFO.:			US 1998-86531P	19980522
			US 1998-128137	19980803
			US 1999-275176	19990324
			US 1999-316761	19990521

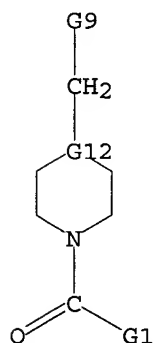
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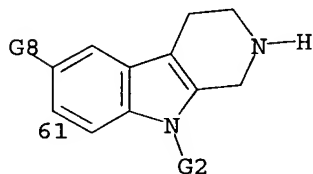
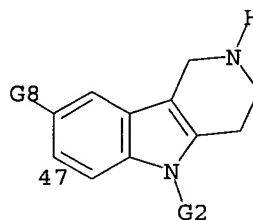
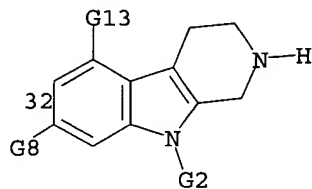
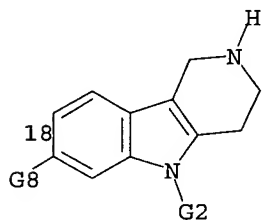
AB Title compds. [I; dotted line = optional double bond; X1 = alkylene optionally containing O, S, or N atom that forms an aliphatic 5-7 membered ring and is optionally substituted by  $\geq 1$  of halo, OR, SR, NR<sub>2</sub>, RCO, CO<sub>2</sub>R, CONR<sub>2</sub>, OOCR, NROCR; R = H, alkyl, cyano, aliphatic or aromatic 5-6 membered ring optionally containing 1-2 heteroatoms; R<sub>1</sub> = Q<sub>1</sub>; X<sub>2</sub> = CO, isostere thereof; m = 0, 1; Y = (substituted) alkyl, aryl, aralkyl; YY form an alkylene bridge; n = 0-4; Z<sub>1</sub> = CH, N; X<sub>3</sub> = CH, CHR<sub>6</sub>; R<sub>6</sub> = H, alkyl; Ar = 1-2 (substituted) Ph; R<sub>2</sub> = H, (substituted) alkyl, aryl; R<sub>3</sub> = H, halo, NO<sub>2</sub>, alkyl, alkenyl, alkynyl, cyano, OH, SH, etc.], were prepared Thus, 4-H<sub>2</sub>NNHC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H.HCl and tert-Bu 4-oxopiperidine-1-carboxylate were refluxed 24 h in EtOH to give the hydrazone, which was refluxed 24 h with HCO<sub>2</sub>H followed by treatment with di-tert-Bu dicarbonate to give the  $\gamma$ -carbolinecarboxylic acid. This was treated with EDC, 4-benzylpiperidine, and DMAP in DMF to give the N-BOC-protected carboxamide, which was deprotected to give (4-benzylpiperidin-1-yl)(2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indol-8-yl)methanone. I inhibited p38 kinase with IC<sub>50</sub> = 0.01-1  $\mu$ M.

REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

## MSTR 1

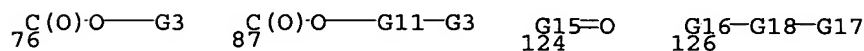


G1 = 18 / 32 / 47 / 61

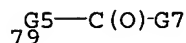


G2 = H / alkyl <containing 1-6 C>

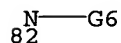
(opt. substd. by 1 or more G14) /  
 aryl (opt. substd. by 1 or more G4) /  
 heteroaryl <containing 1 heteroatom, zero or more N,  
 zero or more O, zero or more S (no other heteroatoms)>  
 (opt. substd. by 1 or more G4) / 76 / 124 / 126 /  
 (Specifically claimed: 87)



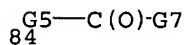
G3 = NH<sub>2</sub> / alkylamino <containing 1-6 C> /  
 dialkylamino <each alkyl containing 1-6 C> /  
 G4 = halo / CN / OH / SH / NH<sub>2</sub> /  
 alkoxy <containing 1-6 C> / alkylthio <containing 1-6 C> /  
 alkylamino <containing 1-6 C> /  
 dialkylamino <each alkyl containing 1-6 C> / CHO /  
 alkylcarbonyl <containing 1-6 C> / CO<sub>2</sub>H /  
 alkoxy carbonyl <containing 1-6 C> / CONH<sub>2</sub> /  
 alkylaminocarbonyl <containing 1-6 C> /  
 dialkylaminocarbonyl <each alkyl containing 1-6 C> / 79



G5 = O / NH / 82



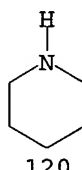
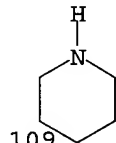
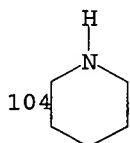
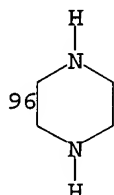
G6 = alkyl <containing 1-6 C>  
 G7 = H / alkyl <containing 1-6 C>  
 G8 = H / halo / NO<sub>2</sub> / alkyl <containing 1-6 C> /  
 alkenyl <containing 2-6 C> / alkynyl <containing 2-6 C> /  
 CN / OH / SH / NH<sub>2</sub> / alkoxy <containing 1-6 C> /  
 alkylthio <containing 1-6 C> / alkylamino <containing 1-6 C> /  
 dialkylamino <each alkyl containing 1-6 C> / CHO /  
 alkylcarbonyl <containing 1-6 C> / CO<sub>2</sub>H /  
 alkoxy carbonyl <containing 1-6 C> / CONH<sub>2</sub> /  
 alkylaminocarbonyl <containing 1-6 C> /  
 dialkylaminocarbonyl <each alkyl containing 1-6 C> / 84 /  
 (Specifically claimed: OMe)



G9 = Ph (opt. substd. by (1-3) G10)  
 G10 = halo / alkyl <containing 1-6 C> / OH / NH<sub>2</sub> /  
 alkoxy <containing 1-6 C> / alkylamino <containing 1-6 C> /  
 dialkylamino <each alkyl containing 1-6 C> /  
 (Specifically claimed: F)  
 G11 = (1-6) CH<sub>2</sub>  
 G12 = CH / (Specifically claimed: N)  
 G13 = H / R / (Specifically claimed: OMe)  
 G14 = halo / CN / OH / SH / NH<sub>2</sub> /  
 alkoxy <containing 1-6 C> / alkylthio <containing 1-6 C> /

alkylamino <containing 1-6 C> /  
 dialkylamino <each alkyl containing 1-6 C> / CHO /  
 alkylcarbonyl <containing 1-6 C> / CO<sub>2</sub>H /  
 alkoxycarbonyl <containing 1-6 C> / CONH<sub>2</sub> /  
 alkylaminocarbonyl <containing 1-6 C> /  
 dialkylaminocarbonyl <each alkyl containing 1-6 C> / 92 /  
 piperazino / pyridyl / piperidino / Ph / 96 / 104 / 109 /  
 120

G5—C(O)—G7  
 92



G15 = carbon chain <containing 1-6 C, saturated>  
 (opt. substd.) / carbocycle <containing 6 or more C,  
 aromatic, 6 or more normalized bonds, mono- or polycyclic,  
 1 or more 6-membered rings> (opt. substd.) /  
 heterocycle <containing 1 heteroatom, zero or more N,  
 zero or more O, zero or more S (no other heteroatoms),  
 aromatic, 2 or more double bonds, mono- or polycyclic,  
 including 5- or 6-membered rings> (opt. substd.)  
 G16 = alkylene <containing 1 or more C> (opt. substd.)  
 G17 = alkyl <containing 1 or more C> (opt. substd.)  
 G18 = O / S / NH (opt. substd.)  
 Patent location: claim 1

L29 ANSWER 15 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 136:167379 MARPAT  
 TITLE: Preparation of amidino-oxazines and derivatives as  
 protease inhibitors  
 INVENTOR(S): Wang, Aihua; Lu, Tianbao; Tomczuk, Bruce E.; Soll,  
 Richard M.; Spurlino, John C.; Bone, Roger F.  
 PATENT ASSIGNEE(S): 3-Dimensional Pharmaceuticals, Inc., USA  
 SOURCE: PCT Int. Appl., 79 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002012207	A1	20020214	WO 2001-US24251	20010802
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
CA 2417914	AA	20020214	CA 2001-2417914	20010802

AU 2001077242	A5	20020218	AU 2001-77242	20010802
US 2002022615	A1	20020221	US 2001-919815	20010802
US 6635637	B2	20031021		
EP 1307432	A1	20030507	EP 2001-955035	20010802

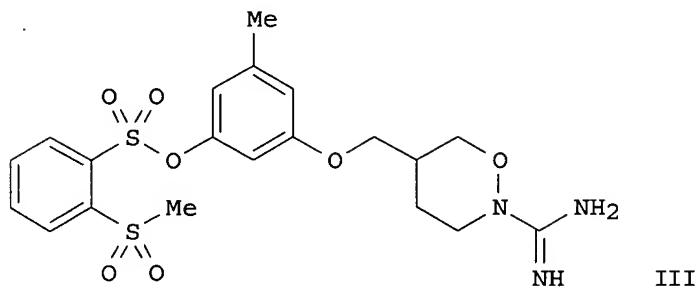
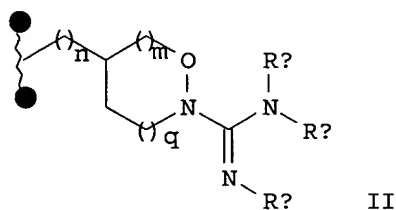
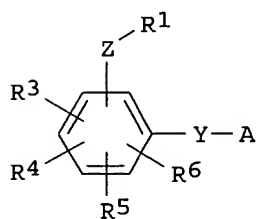
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2004505956	T2	20040226	JP 2002-518184	20010802
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PRIORITY APPLN. INFO.:

US 2000-223223P	20000804
WO 2001-US24251	20010802

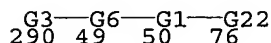
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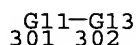
AB Title compds. I [R1 = alk(en/yn)yl, cycloalkyl, aryl, aralkyl or heteroaryl; Z = OSO2, SO2O, alkoxy, etc.; R3-6 = H, alk(en/yn)yl, cycloalkyl, (hetero)aryl, aralkyl, trifluoromethyl, halo, etc.; Y = O, aza, S, alkyl or a covalent bond; A = II and derivs. thereof; R<sub>a-c</sub> = H, alkyl, hydroxy, alkoxy, aryloxy, aralkoxy, alkoxycarbonyloxy, cyano, carboxy; n, m and q = 0-4 provided that n, m, and q are not all zero] were prepared. For instance, diethylmalonate was converted to tert-Bu 5-(hydroxymethyl)tetrahydro-1,2-oxazin-2-carboxylate in 8 steps in 12% yield. This ester was coupled to 3-hydroxy-5-methylphenyl 2-(methylsulfonyl)benzenesulfonate (THF, Ph3P, DEAD), the resulting adduct deprotected (CH2Cl2, TFA) and converted to III using N,N'-bis(tert-butoxycarbonyl)-1H-pyrazole-1-carboxamide followed by treatment with TFA. III had K<sub>i</sub> = 7 nM for thrombin. I exhibit antithrombotic activity via selective inhibition of thrombin, or are intermediates useful for forming compds. having antithrombotic activity. I are also anticoagulants either embedded in or phys. linked to materials used in the manufacture of devices used in blood collection, blood circulation, and blood storage, such as catheters, blood dialysis machines, blood collection syringes and tubes, blood lines and stents.

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

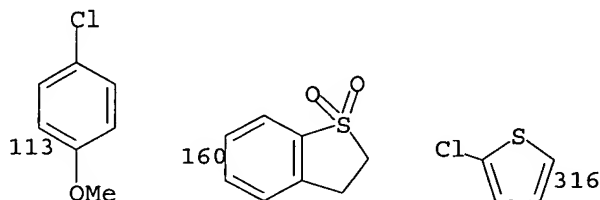
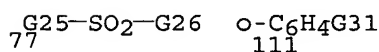
## MSTR 1



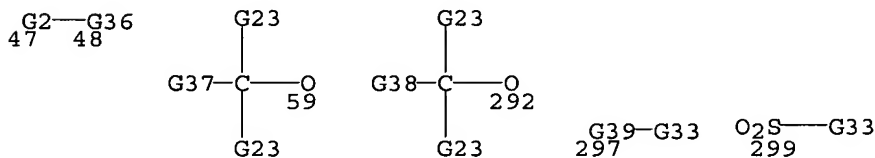
G1 = 301-49 302-76 / G40 /  
alkylene <containing 1 or more C> (opt. substd.)



G2 = carbon chain <containing 1-20 C,  
0 or more double bonds, 0 or more triple bonds>  
(opt. substd.) / cycloalkyl <containing 3-9 C>  
(opt. substd.) / aryl <containing 6-12 C, mono- or bicyclic>  
(opt. substd.) / alkyl <containing 1-6 C>  
(substd. by 1 or more aryl <containing 6-12 C,  
mono- or bicyclic> (opt. substd.)) /  
heteroaryl <containing up to 14 atoms, 1-3 heteroatoms,  
zero or more N, zero or more O,  
zero or more S (no other heteroatoms)> (opt. substd.) /  
(Specifically claimed: pyridyl / thienyl / quinazolinyl /  
quinolinyl / Ph (opt. substd. by (1-2) G24) / naphthyl /  
isoquinolinyl / 77 / pyrazolyl / benzoxazolyl / 111 / 113 /  
316 / 160)

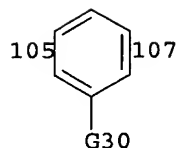


G3 = 48 / 59 / 292 / 297 / 299



G4 = H / alkyl <containing 1-12 C>  
(opt. substd. by 1 or more G5) /  
cycloalkyl <containing 3-9 C> /  
aryl <containing 6-12 C, mono- or bicyclic> / CO<sub>2</sub>H  
G5 = aryl <containing 6-12 C, mono- or bicyclic> / OH /  
CO<sub>2</sub>H / NH<sub>2</sub> / alkylamino <containing 1-6 C> /  
dialkylamino <each alkyl containing 1-6 C>  
G6 = phenylene (opt. substd. by (1-4) G7) /

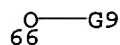
carbocycle <containing 10 C, aromatic, bonds all normalized,  
bicyclic, (2) 6-membered rings> (opt. substd.) /  
carbocycle <containing 6-12 C, aromatic, 6 normalized bonds,  
bicyclic, 1 or more 6-membered rings> (opt. substd.) /  
(Specifically claimed: 105-290 107-50 )



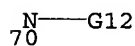
G7 = alkyl <containing 1-12 C> /  
cycloalkyl <containing 3-9 C> / alkenyl <containing 2-20 C> /  
alkynyl <containing 2-20 C> / aryl <containing 6-12 C,  
mono- or bicyclic> (opt. substd.) /  
alkyl <containing 1-6 C> (substd. by 1 or more aryl  
<containing 6-12 C, mono- or bicyclic> (opt. substd.)) /  
heteroaryl <containing up to 14 atoms, 1-3 heteroatoms,  
zero or more N, zero or more O,  
zero or more S (no other heteroatoms)> (opt. substd.) / CF3 /  
F / Cl / Br / I / alkyl <containing 1-12 C>  
(substd. by 1 or more OH) / CN / NO2 / CONH2 / 64 / OH / 68 /  
(Specifically claimed: Me / OMe)



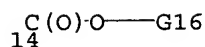
G8 = OH / 66



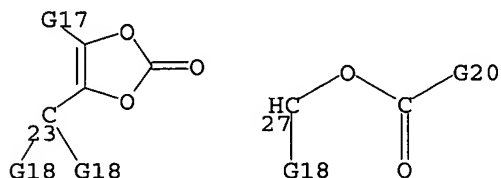
G9 = carbon chain <containing 1-12 C> /  
carbocycle <containing 3-9 C>  
G10 = CH2 / C(O)  
G11 = O / 70 / S



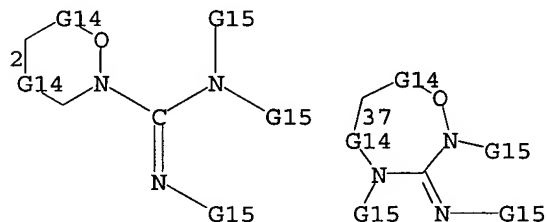
G12 = H / alkyl <containing 1-12 C> /  
alkyl <containing 1-6 C> (substd. by 1 or more aryl  
<containing 6-12 C, mono- or bicyclic>) /  
aryl <containing 6-12 C, mono- or bicyclic> /  
alkyl <containing 2-10 C> (substd. by 1 or more G21) /  
alkyl <containing 1-12 C> (substd. by 1 or more CO2H)  
G13 = (1-4) CH2  
G14 = (0-4) CH2  
G15 = H / alkyl <containing 1-12 C> / OH /  
alkoxy <containing 1-20 C> / aryloxy <containing 6-12 C,  
mono- or bicyclic> / alkoxy <containing 1-6 C>  
(substd. by 1 or more aryl <containing 6-12 C,  
mono- or bicyclic>) / alkoxycarbonyloxy <containing 1-20 C> /  
CN / 14



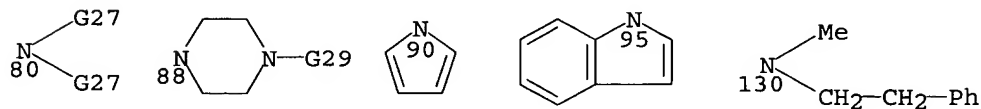
G16 = alkyl <containing 1-12 C> /  
cycloalkyl <containing 3-9 C> / Ph / CH<sub>2</sub>Ph / 23 / 27



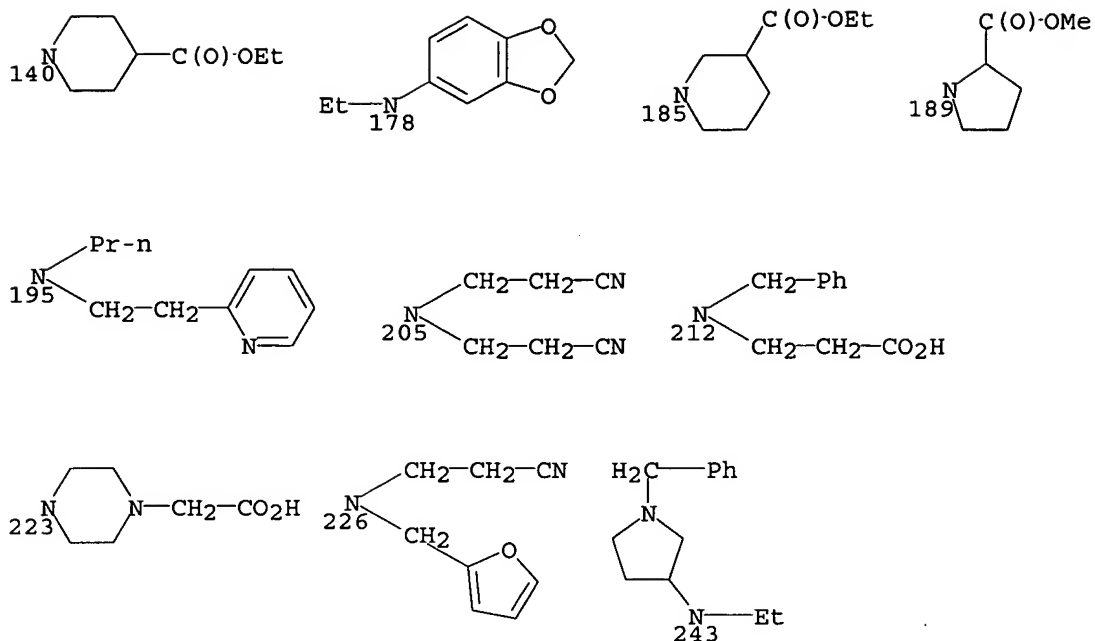
G17 = H / carbon chain <containing 1-6 C,  
0 or more double bonds, no triple bonds> / Ph /  
(Specifically claimed: Me)  
G18 = H / carbon chain <containing 1-6 C,  
0 or more double bonds, no triple bonds> / Ph  
G20 = alkyl <containing 1-6 C>  
(substd. by 1 or more aryl <containing 6-12 C,  
mono- or bicyclic>) / alkyl <containing 1-6 C> /  
(Specifically claimed: CH<sub>2</sub>Ph / Bu-t)  
G21 = OH / NH<sub>2</sub> / alkylamino <containing 1-6 C> /  
dialkylamino <each alkyl containing 1-6 C> /  
(Specifically claimed: NMe<sub>2</sub> / NHMe)  
G22 = 2 / 37



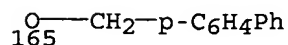
G23 = H / R  
G24 = Cl / OMe / Me / CF<sub>3</sub> / SO<sub>2</sub>Me / CN / NO<sub>2</sub> / NH<sub>2</sub> / NMe<sub>2</sub>  
G25 = phenylene  
G26 = alkyl <containing 1-12 C> /  
aryl <containing 6-12 C, mono- or bicyclic> / 80 /  
morpholino / 88 / 90 / piperidino / pyrrolidino / 95 /  
heterocycle <containing 5-9 atoms, 1-2 heteroatoms, 1-2 N,  
0-1 O, attached through 1 or more N, mono- or bicyclic,  
(0-1) 5-membered, (0-1) 6-membered rings only>  
(opt. substd.) / (Specifically claimed: Me / 130 / 140 /  
178 / 185 / 189 / 195 / 205 / 212 / 223 / 226 / 243)





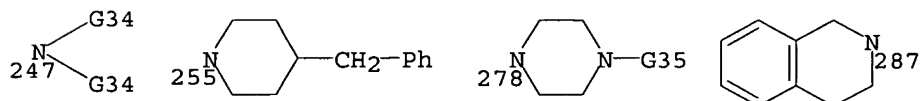


- G27 = H / alkyl <containing 1-6 C> /  
 cycloalkyl <containing 3-7 C> / alkenyl <containing 2-6 C> /  
 alkynyl <containing 2-6 C> / aryl <containing 6-10 C,  
 mono- or bicyclic> / alkyl <containing 1-4 C>  
 (substd. by 1 or more aryl <containing 6-10 C,  
 mono- or bicyclic>) / pyridyl /  
 alkyl <containing 1-4 C> (substd. by pyridyl) /  
 alkyl <containing 1-6 C> (substd. by 1 or more CO<sub>2</sub>H) /  
 alkyl <containing 1-4 C> (substd. by alkoxycarbonyl  
 <containing 1-4 C>) / alkyl <containing 2-6 C>  
 (substd. by CN) / alkyl <containing 2-6 C>  
 (substd. by 1 or more OH) / alkyl <containing 2-6 C>  
 (substd. by G28)
- G28 = alkoxy <containing 1-4 C> /  
 alkylamino <containing 1-4 C> /  
 dialkylamino <each alkyl containing 1-4 C>
- G29 = H / alkyl <containing 1-6 C>  
 (opt. substd. by 1 or more OH) /  
 aryl <containing 6-10 C, mono- or bicyclic> /  
 alkyl <containing 1-6 C> (substd. by 1 or more aryl  
 <containing 6-10 C, mono- or bicyclic>) /  
 alkylsulfonyl <containing 1-6 C> /  
 arylsulfonyl <containing 6-10 C, mono- or bicyclic> /  
 alkylcarbonyl <containing 1-6 C> / morpholino /  
 arylcarbonyl <containing 6-10 C, mono- or bicyclic>
- G30 = Me / Cl
- G31 = OMe / CN / 165

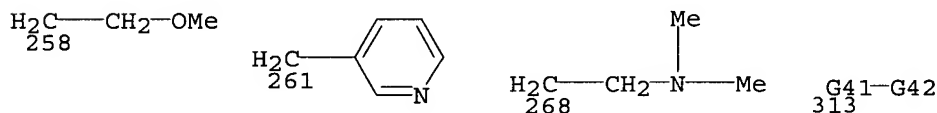


- G33 = 247 / heterocycle <containing 3-11 atoms,  
 1 or more N, zero or more O (no other heteroatoms),

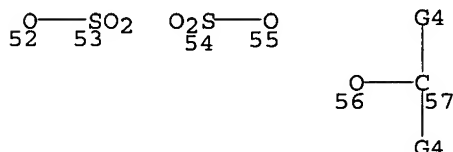
attached through 1 or more N, mono- or bicyclic,  
 0 or more 3-membered, 0 or more 4-membered,  
 0 or more 5-membered, (0-2) 6-membered,  
 0 or more 7-membered rings only> (opt. substd.) /  
 (Specifically claimed: 255 / 278 / 287 / hexahydroazepino)



G34 = H / carbon chain <containing 1 or more C,  
 0 or more double bonds, 0 or more triple bonds>  
 (opt. substd.) / cycloalkyl <containing 3-7 C>  
 (opt. substd.) / cycloalkenyl <containing 3-7 C>  
 (opt. substd.) / heterocycle <containing 3-7 atoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms),  
 0 or more double bonds, no triple bonds> (opt. substd.) /  
 aryl <containing 6-12 C, mono- or bicyclic> (opt. substd.) /  
 heteroaryl <containing up to 14 atoms, 1-3 heteroatoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms)> (opt. substd.) / R /  
 (Specifically claimed: 313 / cyclopentyl / CH<sub>2</sub>CH=CH<sub>2</sub> / 258 /  
 Me / 261 / Et / 268)



G35 = CHO / CH<sub>2</sub>Ph  
 G36 = 52-47 53-49 / 54-47 55-49 / 56-47 57-49



G37 = carbon chain <containing 1-20 C,  
 0 or more double bonds, 0 or more triple bonds>  
 (opt. substd.) / alkyl <containing 1-6 C>  
 (substd. by 1 or more aryl <containing 6-12 C,  
 mono- or bicyclic> (opt. substd.))  
 G38 = cycloalkyl <containing 3-9 C> (opt. substd.) /  
 aryl <containing 6-12 C, mono- or bicyclic> (opt. substd.) /  
 heteroaryl <containing up to 14 atoms, 1-3 heteroatoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms)> (opt. substd.)  
 G39 = C(O) / CH<sub>2</sub> (opt. substd.)  
 G40 = (1-5) CH<sub>2</sub>  
 G41 = carbon chain <containing 1-6 C,  
 0 or more double bonds, no triple bonds> (opt. substd.)  
 G42 = heterocycle <containing 3-7 atoms, zero or more N,

zero or more O, zero or more S (no other heteroatoms),  
 non-aromatic, saturated> / aryl <containing 6-12 C,  
 mono- or bicyclic> (opt. substd. by CO<sub>2</sub>H (opt. substd.)) /  
 heteroaryl <containing up to 14 atoms, 1-3 heteroatoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms)> (opt. substd. by OH) /  
 triazolyl / tetrazolyl (opt. substd. by alkyl <containing  
 1-6 C>)

Patent location: claim 1  
 Note: or solvates, hydrates or pharmaceutically  
 acceptable salts  
 Note: also incorporates claim 25

L29 ANSWER 16 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 136:118472 MARPAT  
 TITLE: Preparation of benzimidazole-5-carboxamides and  
 indole-5-carboxamides to treat cardiac failure and  
 other disorders  
 INVENTOR(S): Mavunkel, Babu J.; Lewicki, John A.; Liu, David Y.;  
 Schreiner, George F.; Perumattam, John J.  
 PATENT ASSIGNEE(S): Scios, Inc., USA  
 SOURCE: U.S., 27 pp., Cont.-in-part of U.S. 6,130,235.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 7  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6340685	B1	20020122	US 1999-275176	19990324
US 6130235	A	20001010	US 1998-128137	19980803
WO 9961426	A1	19991202	WO 1999-US11222	19990521
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9940920	A1	19991213	AU 1999-40920	19990521
AU 769465	B2	20040129		
BR 9911069	A	20010206	BR 1999-11069	19990521
EP 1080078	A1	20010307	EP 1999-924412	19990521
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002516314	T2	20020604	JP 2000-550832	19990521
US 6589954	B1	20030708	US 1999-316761	19990521
NZ 508790	A	20031031	NZ 1999-508790	19990521
WO 2000059904	A2	20001012	WO 2000-US7934	20000324
WO 2000059904	A3	20010111		
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RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,  
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6448257	B1	20020910	US 2000-535316	20000324
US 6867209	B1	20050315	US 2000-575060	20000519
NO 2000005881	A	20010109	NO 2000-5881	20001121
US 2003073699	A1	20030417	US 2002-76131	20020213
PRIORITY APPLN. INFO.:			US 1998-86531P	19980522
			US 1998-128137	19980803
			US 1999-275176	19990324
			US 1999-316761	19990521
			WO 1999-US11222	19990521
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			US 2000-202608P	20000509

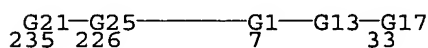
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

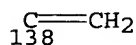
AB The title compds. [I-IV; Z1, Z2 = CR4, N; R4 = H, (un)substituted alkyl optionally including one or more heteroatoms selected from O, S and N; or two R4 taken together form a bridge optionally containing a heteroatom; R1 = V (wherein X1 = CO or an isostere thereof; m = 0-1; Y = (un)substituted alkyl, aryl, arylalkyl or two Y taken together may form an alkylene bridge; n = 0-2; Z3 = CH, N; X2 = CH, CH2 or an isostere thereof; Ar consists of one or two (un)substituted Ph moieties directly coupled to X2); R2 = H, (un)substituted alkyl optionally including one heteroatom which is O, S or N; R3 = H, halo, NO2, etc.], useful in treating inflammation, were prepared Thus, amidation of benzimidazole-5-carboxylic acid with tert-Bu 1-piperazinecarboxylate (86%) followed by deprotection (100%), and reaction of the resulting amide with 2,6-difluorobenzyl bromide afforded VI. Compds. I were found to inhibit p38 kinase, in particular, p38 kinase  $\alpha$  (data given) and are thus useful in treating diseases mediated by this enzyme.

REFERENCE COUNT: 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

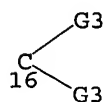
MSTR 1



G1 = C(O) / S(O) / CHOH / SO2 /  
 (Examples: R <"isostere"> / 138)



G2 = 16 / (Example: bond)



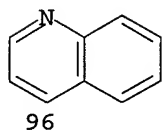
G3 = H / alkyl (opt. substd. by 1 or more G4) /  
 aryl (opt. substd.) / (Example: Me)  
 G4 = R / aryl (opt. substd.)  
 G5 = N / (Example: 18)

$\overset{\text{C}}{\underset{18}{\text{---}}} \text{G3}$

G6 = H / Ph (opt. substd. by 1 or more G20)  
 G7 = halo / NO<sub>2</sub> / alkyl <containing 1-6 C> /  
 alkenyl <containing 2-6 C> / CN / CF<sub>3</sub> / CHO /  
 alkylcarbonyl <containing 1-6 C> / CO<sub>2</sub>H /  
 alkoxycarbonyl <containing 1-6 C> / CONH<sub>2</sub> /  
 alkylaminocarbonyl <containing 1-6 C> /  
 dialkylaminocarbonyl <each alkyl containing 1-6 C> / NH<sub>2</sub> /  
 alkylamino <containing 1-6 C> /  
 dialkylamino <each alkyl containing 1-6 C> / OH /  
 alkoxy <containing 1-6 C> / SH /  
 alkylthio <containing 1-6 C> / OCHO /  
 alkylcarbonyloxy <containing 1-6 C> / 25 /  
 Ph (opt. substd. by 1 or more G12) /  
 (Specifically claimed: F / Cl / CH<sub>2</sub>CO<sub>2</sub>H / OMe / OCF<sub>3</sub> / SMe /  
 Me / NEt<sub>2</sub> / OPh)

$\overset{\text{G9}}{\underset{25}{\text{---}}} \text{C(O)} \text{---G10}$

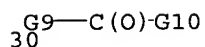
G8 = Ph (opt. substd. by 1 or more G7) /  
 (Specifically claimed: 2-naphthyl / 96)



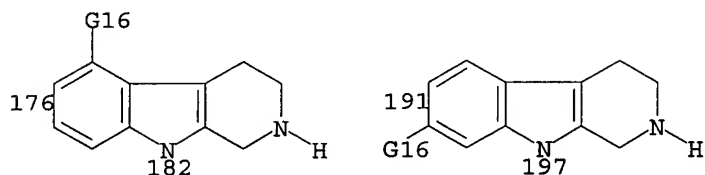
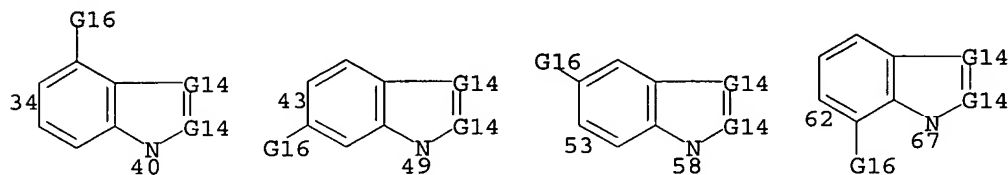
G9 = NH / 28

$\overset{\text{N}}{\underset{28}{\text{---}}} \text{G11}$

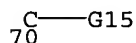
G10 = H / alkyl <containing 1-6 C>  
 G11 = alkyl <containing 1-6 C>  
 G12 = halo / NO<sub>2</sub> / alkyl <containing 1-6 C> /  
 alkenyl <containing 2-6 C> / CN / CF<sub>3</sub> / CHO /  
 alkylcarbonyl <containing 1-6 C> / CO<sub>2</sub>H /  
 alkoxycarbonyl <containing 1-6 C> / CONH<sub>2</sub> /  
 alkylaminocarbonyl <containing 1-6 C> /  
 dialkylaminocarbonyl <each alkyl containing 1-6 C> / NH<sub>2</sub> /  
 alkylamino <containing 1-6 C> /  
 dialkylamino <each alkyl containing 1-6 C> / OH /  
 alkoxy <containing 1-6 C> / SH /  
 alkylthio <containing 1-6 C> / OCHO /  
 alkylcarbonyloxy <containing 1-6 C> / 30



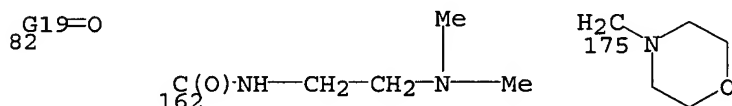
G13 = 34-7 40-33 / 43-7 49-33 / 53-7 58-33 /  
 62-7 67-33 / (Examples: heterocycle <containing 9 or more  
 atoms, 1 or more N, 8 or more C, aromatic,  
 6 or more normalized bonds, 1 or more double bonds,  
 2 or more C fusion atoms, 3 or more rings,  
 1 or more 5-membered, 1 or more 6-membered rings>  
 (opt. substd.) / 176-7 182-33 / 191-7 197-33 )



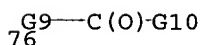
G14 = N / 70



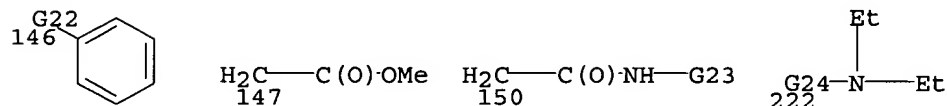
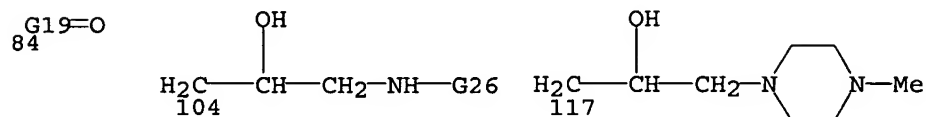
G15 = H / alkyl <containing 1-6 C> (opt. substd.) / 82 /  
 (Examples: 162 / 175 / Me)



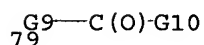
G16 = H / halo / NO2 / alkyl <containing 1-6 C> /  
 alkenyl <containing 2-6 C> / CN / CHO /  
 alkylcarbonyl <containing 1-6 C> / CO2H /  
 alkoxy carbonyl <containing 1-6 C> / CONH2 /  
 alkylaminocarbonyl <containing 1-6 C> /  
 dialkylaminocarbonyl <each alkyl containing 1-6 C> / NH2 /  
 alkylamino <containing 1-6 C> /  
 dialkylamino <each alkyl containing 1-6 C> / OH /  
 alkoxy <containing 1-6 C> / SH /  
 alkylthio <containing 1-6 C> / OCHO /  
 alkylcarbonyloxy <containing 1-6 C> / 76 / (Examples: Cl /  
 OMe)



G17 = H / alkyl <containing 1-6 C>  
 (opt. substd. by 1 or more G18) / 84 /  
 (Specifically claimed: Pr-i / Me / Et) / (Examples: 104 /  
 117 / 146 / 147 / 150 / 222 / pyridyl)

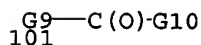


G18 = R / halo / alkyl <containing 1-6 C> /  
 alkenyl <containing 2-6 C> / CN / CHO /  
 alkylcarbonyl <containing 1-6 C> / CO<sub>2</sub>H /  
 alkoxy carbonyl <containing 1-6 C> / CONH<sub>2</sub> /  
 alkylaminocarbonyl <containing 1-6 C> /  
 dialkylaminocarbonyl <each alkyl containing 1-6 C> / NH<sub>2</sub> /  
 alkylamino <containing 1-6 C> /  
 dialkylamino <each alkyl containing 1-6 C> / OH /  
 alkoxy <containing 1-6 C> / SH /  
 alkylthio <containing 1-6 C> / OCHO /  
 alkylcarbonyloxy <containing 1-6 C> / 79 / CN /  
 carbocycle <containing 5-6 C> /  
 heterocycle <containing 5-6 atoms, 1-2 heteroatoms, 1-2 N,  
 5- to 6-membered monocyclic ring>

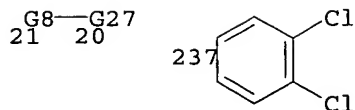


G19 = carbon chain <containing 1-6 C, saturated>  
 (opt. substd.)

G20 = halo / NO<sub>2</sub> / alkyl <containing 1-6 C> /  
 alkenyl <containing 2-6 C> / CN / CF<sub>3</sub> / CHO /  
 alkylcarbonyl <containing 1-6 C> / CO<sub>2</sub>H /  
 alkoxy carbonyl <containing 1-6 C> / CONH<sub>2</sub> /  
 alkylaminocarbonyl <containing 1-6 C> /  
 dialkylaminocarbonyl <each alkyl containing 1-6 C> / NH<sub>2</sub> /  
 alkylamino <containing 1-6 C> /  
 dialkylamino <each alkyl containing 1-6 C> / OH /  
 alkoxy <containing 1-6 C> / SH /  
 alkylthio <containing 1-6 C> / OCHO /  
 alkylcarbonyloxy <containing 1-6 C> / 101 /  
 Ph (opt. substd.) / (Specifically claimed: F)

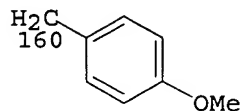


G21 = 20 / (Specifically claimed: 237)



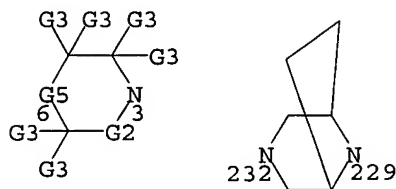
G22 = C(O) / CH<sub>2</sub>

G23 = Pr-n / 160

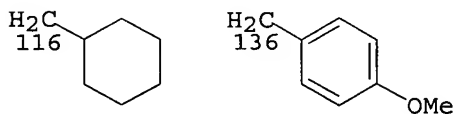


G24 = (2-3) CH<sub>2</sub>

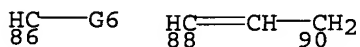
G25 = 6-235 3-7 / (Example: 232-235 229-7 )



G26 = 116 / CH<sub>2</sub>Ph / 136 / Pr-n



G27 = 86 / (Specifically claimed: 88-21 90-226 / C(O)) /  
(Example: R <"isostere">)



Patent location:

claim 1

Note:

additional ring formation also disclosed

Note:

substitution is restricted

Note:

and pharmaceutically acceptable salts

L29 ANSWER 17 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 135:5625 MARPAT

TITLE: Diabetic remedy containing dipiperazine derivative

INVENTOR(S): Yamaguchi, Hiroshi; Maruta, Katsunori; Nagata, Ryu; Ushiroda, Kantaro; Iwai, Kiyotaka

PATENT ASSIGNEE(S): Sumitomo Pharmaceuticals Co., Ltd., Japan

SOURCE: PCT Int. Appl., 176 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

Japanese

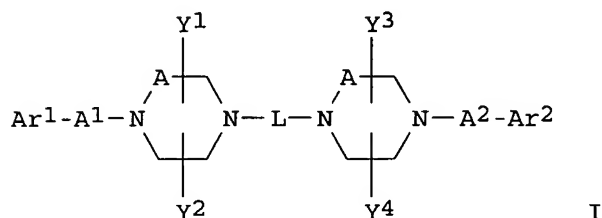
FAMILY ACC. NUM. COUNT: 1



## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001036386	A1	20010525	WO 2000-JP8065	20001115
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			JP 1999-326751	19991117

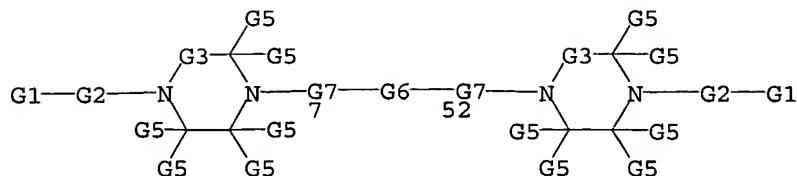
GI



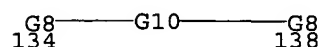
AB A remedy for diabetes contains a dipiperazine derivative represented by formula (I) or a pharmacol. acceptable salt thereof. [wherein Ar1 and Ar2 each represents optionally substituted Ph, naphthyl, or heterocyclyl; A1 and A2 each represents optionally substituted alkylene or carbonyl (provided that not both of A1 and A2 are carbonyl); A represents methylene or ethylene; Y1, Y2, Y3, and Y4 each represents hydrogen or alkyl; L represents -L3-X1-L1-X2-L2-X3-L4-; L3 and L4 each represents carbonyl or sulfonyl; X1 and X3 each represents a single bond, NR1, or O; R1 represents hydrogen or alkyl; X2 represents a single bond, optionally substituted alkylene, heteroarylene, phenylene, or cycloalkylidene, cycloalkylene, divalent aliphatic heterocyclic group, vinylene, ethynylene, S, O, NR2CO, NR3CONR4, NR2CO2, OCO2, O2C, CO, or N(COR5); etc.; R2, R3, R4, and R5 each represents hydrogen or alkyl; and L1 and L2 each represents a single bond, optionally substituted alkylene, vinylene, or phenylene; provided that when X2 is single bond, vinylene, ethynylene, S, O, NR2CO, NR3CONR4, NR2CO2, OCO2, O2C, CO, or N(COR5), L1 or L2 is not a single bond; or when L1 or L2 is vinylene, X1 and X3 are a single bond]. These compds. lower blood sugar level and improve insulin resistance. Thus, 110 mg N-[4-(1-piperazinylcarbonyl)phenyl]-1-piperazinecarboxamide (preparation given) was dissolved in 6 mL DMF, treated with 195 mg K2CO3 and 270 mg 4-(trifluoromethyl)benzyl bromide, and stirred at 50° for 5 h to give 4-[4-(trifluoromethyl)benzyl]-N-[4-[[4-(4-(trifluoromethyl)benzyl)-1-piperazinyl]carbonyl]phenyl]-1-piperazinecarboxamide (II). II was administered to mice at 3 mg/kg p.o., immediately followed by insulin 3 U/kg s.c. After 4 h, the blood sugar level lowered from 261±92 (control) to 129±43 mg/dL.

REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

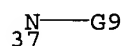
MSTR 1B



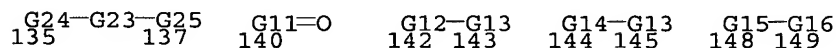
- G1 = Ph (opt. substd. by 1 or more G21) /  
naphthyl (opt. substd.) / heterocycle <containing zero or  
more O, zero or more S, zero or more N> (opt. substd.)  
G2 = alkylene (opt. substd. by G17) / (up to 1) C(O)  
G3 = (1-2) CH2 (opt. substd. by G4)  
G4 = alkyl  
G5 = alkyl / H  
G6 = 134-7 138-52



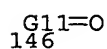
- G7 = C(O) / SO2  
G8 = bond / NH / 37 / O



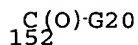
- G9 = alkyl  
G10 = bond / carbon chain <containing 1 or more C,  
0-1 double bond, 0-1 triple bond> (opt. substd. by G18) /  
140 / 135-134 137-138 / 142-134 143-138 /  
144-134 145-138 / phenylene / 148-134 149-138



- G11 = carbon chain <containing 1 or more C, saturated>  
(opt. substd.)  
G12 = phenylene  
G13 = carbon chain <containing 1 or more C,  
0-1 double bond, 0-1 triple bond> (opt. substd. by G18) /  
146



- G14 = phenylene  
G15 = phenylene  
G16 = phenylene  
G17 = R / (Example: 152)



G18 = R / (Examples: alkoxy <containing 1-4 C> / OCHO /  
alkylcarbonyloxy <containing 1-4 C> / CN / 150)

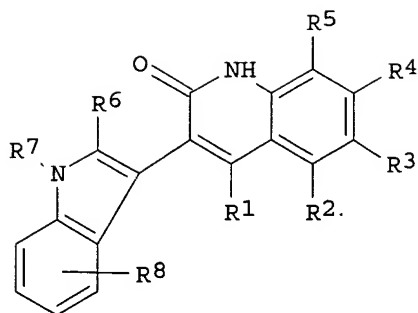
<sup>C(O)</sup>G19  
150

G19 = OH / alkoxy <containing 1-4 C> / NH2 / alkylamino /  
dialkylamino  
G20 = alkoxy / alkylamino / dialkylamino / NH2  
G21 = R / (Specifically claimed: halo / alkyl / CF3 /  
OCF3) / (Examples: CN / alkyl (substd. by 1 or more halo) /  
alkoxy (opt. substd. by 1 or more halo) / CONH2 /  
alkylaminocarbonyl / dialkylaminocarbonyl)  
G23 = alkylene (opt. substd. by G18) /  
CH=CH (opt. substd.) / ethynylene / C(O)  
G24 = phenylene  
G25 = phenylene  
Patent location: claim 1  
Note: substitution is restricted  
Note: or pharmacologically acceptable salts  
Note: additional substitution also claimed

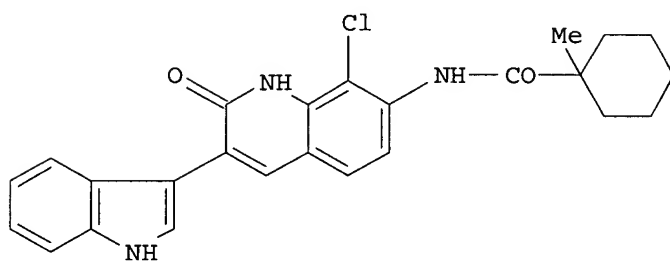
L29 ANSWER 18 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 134:266203 MARPAT  
TITLE: Preparation and application of benzopyranone  
derivatives  
INVENTOR(S): Kato, Susumu; Fujisawa, Akitaka; Nanayama, Toyomichi  
PATENT ASSIGNEE(S): Japan Tobacco, Inc., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 65 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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JP 2001089471	A2	20010403	JP 2000-214857	20000714
PRIORITY APPLN. INFO.:			JP 1999-206924	19990721

GI



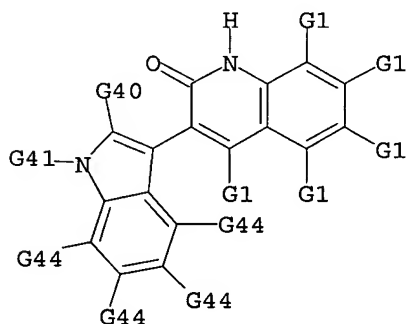
I



II

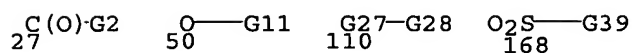
AB Title compds. [I; R1, R2 and R3, as for R4 and R5 equality or differing, the hydrogen atom, the halogen atom, the hydroxyl group and nitro group, the amino base, a low-grade alkyl group, and a low-grade alkoxy group et cetera; R6 is a hydrogen atom or a halogen atom; R7 the hydrogen atom or a low-grade alkyl group; R8 the hydrogen atom, the halogen atom and the low-grade alkyl group, a hydroxyl group, a carboxyl group and an amino base; etc.] and salts are prepared and is useful in medicine, by inhibiting the phosphorylation of the PDGF receptors. Title compds. have inhibition effect on smooth muscle multiplication and are useful as re-strangulation remedy agents and the nephritis remedy agents. Thus, the title compound II was prepared and tested.

#### MSTR 1

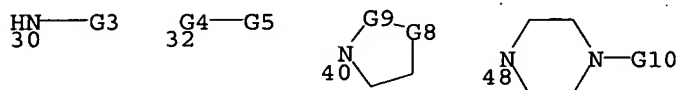


G1 = H / halo / alkyl <containing 1-6 C>  
(opt. substd. by 1 or more halo) /

alkyl <containing 1-6 C> (substd. by OH) / NO2 / 27 /  
 50 /  
 110 / 168

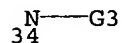


G2 = OH / NH2 / 30 / 32 / 40 / 48

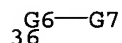


G3 = alkyl <containing 1-6 C>

G4 = O / NH / 34



G5 = alkyl <containing 1-6 C> / Ph (opt. substd.) /  
 naphthyl / 36



G6 = carbon chain <0 or more double bonds,  
 no triple bonds>

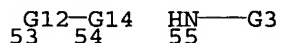
G7 = Ph (opt. substd.) / naphthyl /  
 alkylamino <containing 1-5 C> /  
 dialkylamino <each alkyl containing 1-5 C> / CO2H /  
 alkoxy carbonyl <containing 1-6 C>

G8 = CH2 / O

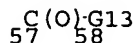
G9 = alkylene <containing 1-3 C, unbranched>

G10 = H / alkyl <containing 1-6 C> / Ph (opt. substd.) /  
 naphthyl / alkyl <containing 1-6 C>  
 (substd. by 1 or more Ph)

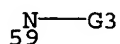
G11 = CHO / NH2 / 55 / 53



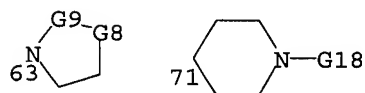
G12 = C(O) / 57-50 58-54



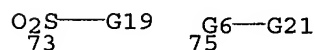
G13 = NH / 59



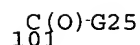
- G14 = alkyl <containing 1-6 C>  
 (opt. substd. by 1 or more halo) /  
 alkenyl <containing 2-6 C> / cycloalkyl <containing 3-8 C> /  
 Ph (opt. substd.) / naphthyl (opt. substd.) /  
 heteroaryl <containing 1-3 heteroatoms, zero or more N,  
 zero or more O, zero or more S (no other heteroatoms)>  
 (opt. substd. by (1-2) G17)
- G17 = halo / NH2 / alkylamino <containing 1-5 C> /  
 dialkylamino <each alkyl containing 1-5 C> / 63 ./ 71



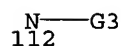
- G18 = H / alkyl <containing 1-6 C>  
 (opt. substd. by 1 or more Ph) /  
 alkoxycarbonyl <containing 1-6 C> / 73 / 75



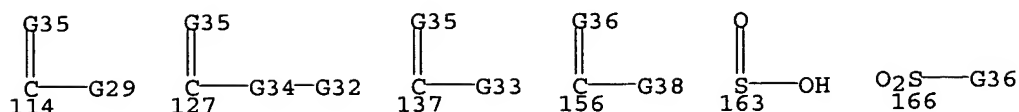
- G19 = carbocycle <containing 6-10 C, aromatic,  
 bonds all normalized, mono- or bicyclic,  
 (1-2) 6-membered rings> (opt. substd.)
- G21 = halo / cycloalkyl <containing 3-8 C> /  
 carbocycle <containing 6-10 C, aromatic,  
 bonds all normalized, mono- or bicyclic,  
 (1-2) 6-membered rings> (opt. substd.) /  
 heteroaryl <containing 1-3 heteroatoms, zero or more N,  
 zero or more O, zero or more S (no other heteroatoms)> /  
 OH (opt. substd.) / NH2 (opt. substd.) /  
 heterocycle <containing 1-2 heteroatoms, 1-2 N,  
 0-1 O (no other heteroatoms), 3 or more C,  
 attached through 1 or more N, non-aromatic, saturated,  
 5- to 7-membered monocyclic ring> (opt. substd.) / 101 /  
 alkylsulfonyl <containing 1-6 C>



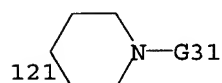
- G25 = carbocycle <containing 6-10 C, aromatic,  
 bonds all normalized, mono- or bicyclic,  
 (1-2) 6-membered rings> (opt. substd.) / OH /  
 alkoxy <containing 1-6 C> / NH2 (opt. substd.) /  
 heterocycle <containing 1-2 heteroatoms, 1-2 N,  
 0-1 O (no other heteroatoms), 3 or more C,  
 attached through 1 or more N, non-aromatic, saturated,  
 5- to 7-membered monocyclic ring> (opt. substd.)
- G27 = NH / 112



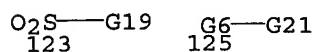
- G28 = 114 / 127 / 137 / 156 / 163 / 166



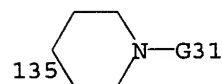
G29 = H / alkyl <containing 1-6 C>  
(opt. substd. by 1 or more halo) /  
alkenyl <containing 2-6 C> / cycloalkyl <containing 3-8 C> /  
Ph (opt. substd.) / naphthyl (opt. substd.) /  
heteroaryl <containing 1-3 heteroatoms, zero or more N,  
zero or more O, zero or more S (no other heteroatoms)> / 121



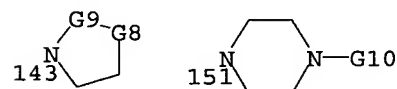
G31 = H / alkyl <containing 1-6 C>  
(opt. substd. by 1 or more Ph) /  
alkoxycarbonyl <containing 1-6 C> / 123 / 125



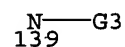
G32 = alkyl <containing 1-6 C>  
(opt. substd. by 1 or more halo) /  
alkenyl <containing 2-6 C> / cycloalkyl <containing 3-8 C> /  
Ph (opt. substd.) / naphthyl (opt. substd.) /  
heteroaryl <containing 1-3 heteroatoms, zero or more N,  
zero or more O, zero or more S (no other heteroatoms)> / 135



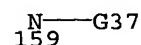
G33 = NH<sub>2</sub> / alkylamino <containing 1-6 C> / 143 / 151 / OH



G34 = 0 / NH / 139



G35 = O / S  
G36 = NH / 159



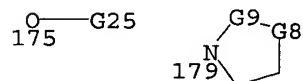
G37 = alkyl <containing 1-6 C> / CN  
 G38 = NH2 / 161

~~HN~~—G32  
 161

G39 = alkyl <containing 1-6 C> /  
       alkylamino <containing 1-5 C> /  
       dialkylamino <each alkyl containing 1-5 C>  
 G40 = H / halo  
 G41 = H / alkyl <containing 1-6 C> / 172

~~G42~~—C(O)—G43  
 172

G42 = alkylene <containing 1-2 C, unbranched>  
 G43 = OH / alkoxy <containing 1-6 C> / 175 /  
       alkoxy (substd. by 1 or more G25) / 179



G44 = 3 or more H / halo / alkyl <containing 1-6 C> / OH /  
       alkoxy <containing 1-6 C> / NO2 / NH2 / CO2H /  
       alkoxycarbonyl <containing 1-6 C>

Patent location: claim 1

Note: or pharmacologically acceptable salts

L29 ANSWER 19 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 134:222699 MARPAT

TITLE: Preparation of phenanthrolinones as  
 antifibroproliferatives.

INVENTOR(S): Edwards, Philip Neil; Large, Michael Stewart; Hales,  
 Neil James

PATENT ASSIGNEE(S): Zeneca Limited, UK

SOURCE: U.S., 31 pp., Cont.-in-part of U.S. Ser. No. 179,542.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

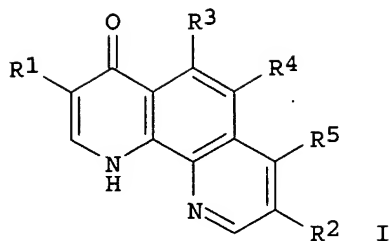
FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 6200974	B1	20010313	US 1999-304677	19990504
US 5916898	A	19990629	US 1997-957450	19971024
US 2001001101	A1	20010510	US 2000-747254	20001220
PRIORITY APPLN. INFO.:			US 1997-957450	19971024
			US 1998-179542	19981026
			US 1999-304677	19990504

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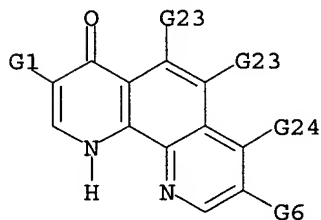




AB Title compds. (I; R1 = H, CO<sub>2</sub>H, cyano, NO<sub>2</sub>, alkyl, hydroxyalkyl, alkoxyalkyl, alkylamino, alkanoyl, alkoxyalkoxyalkyl, PhS, dialkylcarbamoylethoxycarbonyl, etc.; R2 = H, CO<sub>2</sub>H, alkoxyalkyl, carbamoyl, alkylcarbamoylethoxycarbonyl, alkylcyclohexylcarbamoylethoxycarbonyl, 1,2,3,4-tetrahydro-isoquinolin-2-ylcarbonyl, dialkylthiocarbamoylethoxycarbonyl, etc.; R3, R4 = H, alkyl, alkoxy, NO<sub>2</sub>, OH, fluoroalkyl, pyridinyl, halo; or R4 = OMe; R5 = H, OH, amino, alkylamino, dialkylamino, alkoxyalkoxy, fluoroalkoxy, pyrrolidin-1-yl, piperidinyl, piperazinyl, morpholinyl, halo), were prepared. Thus, 8-aminoquinoline and di-Et ethoxymethylenemalonate were refluxed 18 h in EtOH to give 84% 3-ethoxycarbonyl-4-oxo-3,4-dihydro-1,10-phenanthroline. This was refluxed 2 h with 5M HCl to give 95% 3-carboxy-4-oxo-3,4-dihydro-1,10-phenanthroline (II). II was stirred with carbonyldiimidazole in DMF at 100° for 2.5 h to give 92% 3-(imidazol-1-ylcarbonyl)-4-oxo-3,4-dihydro-1,10-phenanthroline. The latter was added to a mixture prepared from 2-(2-methoxyethoxy)ethanol and NaH in DMF followed by stirring for 18 h to give 68% 3-[2-(2-methoxyethoxy)ethoxycarbonyl]-4-oxo-3,4-dihydro-1,10-phenanthroline. I at 50 µg in a wound chamber model gave 51.06-112.29% of the collagen content of controls. II drug formulations are claimed.

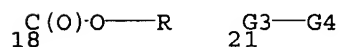
REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

#### MSTR 1

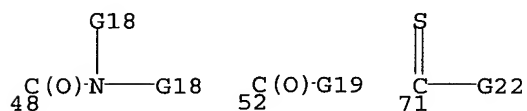
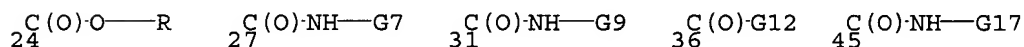


G1 = H / CO<sub>2</sub>H / 18 / CN / F / Cl / Br / I / NO<sub>2</sub> / NH<sub>2</sub> / alkyl <containing 1-4 C> / alkylamino <containing 1-4 C> / dialkylamino <each alkyl containing 1-4 C> / alkoxyalkyl <containing 1-6 C> / alkylcarbonyl <containing 1-3 C> / alkyl <containing 1-4 C> (substd. by OH) / CONH<sub>2</sub> / alkylaminocarbonyl <containing 1-4 C> / 21 / alkoxyalkyl <containing 2-4 C> (substd. by alkoxy <containing 1-4 C>) / alkoxyalkyl <containing 1-4 C> (substd. by dialkylaminocarbonyl <each alkyl containing 1-4 C>) / alkoxyalkyl <containing 2-4 C>

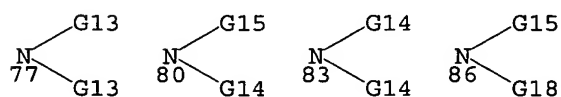
(substd. by alkylamino <containing 1-4 C>) /  
 alkoxycarbonyl <containing 2-4 C>  
 (substd. by dialkylamino <each alkyl containing 1-4 C>) /  
 alkoxycarbonyl <containing 2-4 C>  
 (substd. by alkoxy <containing 2-4 C>  
 (substd. by alkoxy <containing 1-4 C>)) /  
 alkyl <containing 1-4 C> (substd. by alkylcarbonyloxy  
 <containing 1-3 C>) / alkylaminocarbonyl <containing 2-8 C>  
 (substd. by NH2) / alkoxycarbonyl <containing 2-4 C>  
 (substd. by morpholino)



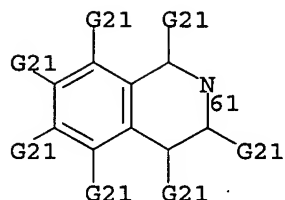
G3 = S / S(O) / SO2  
 G4 = Ph (opt. substd. by (1-4) G5) /  
 alkyl <containing 1-4 C> (opt. substd. by 1 or more F)  
 G5 = F / Cl / Br / I / alkyl <containing 1-4 C> /  
 alkoxy <containing 1-4 C> / CN / OH / CF3  
 G6 = H / OH / NH2 / CN / F / Cl / Br / I /  
 alkyl <containing 1-4 C> / CO2H / 24 /  
 alkylamino <containing 1-4 C> /  
 dialkylamino <each alkyl containing 1-4 C> /  
 alkoxycarbonyl <containing 1-6 C> /  
 alkylcarbonyl <containing 1-3 C> /  
 alkoxy <containing 1-4 C> (opt. substd. by CO2H) /  
 alkoxy <containing 1-4 C> (substd. by alkoxycarbonyl  
 <containing 1-4 C>) / CONH2 / alkylaminocarbonyl <containing  
 1-8 C> / dialkylaminocarbonyl <each alkyl containing 1-8 C> /  
 27 / 31 / 36 / 45 / 48 / 52 / 71 /  
 alkylcarbonylamino <containing 1-3 C> /  
 alkoxycarbonylamino <containing 1-4 C>



G7 = alkyl <containing 1-8 C> (substd. by G8)  
 G8 = NH2 / alkylamino <containing 1-4 C> /  
 dialkylamino <each alkyl containing 1-4 C>  
 G9 = cyclohexyl (opt. substd. by alkyl <containing 1-4 C>  
 ) / cyclopentyl (opt. substd. by alkyl <containing 1-4 C>) /  
 Ph (opt. substd. by (1-4) G5) /  
 alkyl <containing 1-4 C> (substd. by 1 or more G13)  
 G12 = 77 / 80 / 83 / 86



- G13 = Ph (opt. substd. by (1-4) G5)  
 G14 = alkyl <containing 1-4 C> (substd. by 1 or more G13)  
 G15 = alkyl <containing 1-4 C>  
 G17 = alkylcarbonyl <containing 1-3 C> /  
 alkoxy carbonyl <containing 1-4 C> /  
 alkyl <containing 1-6 C> (substd. by 2 or more F)  
 G18 = alkyl <containing 2-6 C>  
 (opt. substd. by 1 or more F)  
 G19 = pyrrolidino (opt. substd. by (1-4) G20) /  
 piperidino (opt. substd. by (1-4) G20) /  
**piperazino (opt. substd. by (1-4) G20) /**  
 morpholino (opt. substd. by (1-4) G20) / 61



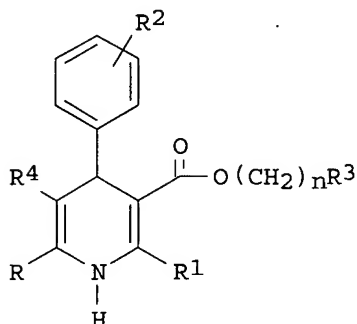
- G20 = alkyl <containing 1-4 C> / **CH2Ph**  
 G21 = H / alkyl <containing 1-4 C> / CH2Ph  
 G22 = dialkylamino <each alkyl containing 1-4 C>  
 G23 = H / alkyl <containing 1-4 C> /  
 alkoxy <containing 2-4 C> / F / Cl / Br / I / NO2 / OH /  
 alkyl <containing 1-4 C> (substd. by 1 or more F) / pyridyl /  
 OMe  
 G24 = H / OH / NH2 / alkylamino <containing 1-4 C> /  
 dialkylamino <each alkyl containing 1-4 C> / F / Cl / Br /  
 I / alkoxy <containing 2-4 C> (substd. by alkoxy <containing  
 1-4 C>) / alkoxy <containing 1-6 C>  
 (substd. by 1 or more F) / pyrrolidino (opt. substd. by (1-4)  
 G25) / piperidino (opt. substd. by (1-4) G25) /  
 piperazino (opt. substd. by (1-4) G25) /  
 morpholino (opt. substd. by (1-4) G25)  
 G25 = alkyl <containing 1-4 C> / CH2Ph  
 Derivative: or pharmaceutically acceptable salts  
 Patent location: disclosure

L29 ANSWER 20 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 134:71495 MARPAT  
 TITLE: Preparation of dihydropyridine derivatives as N-type  
 calcium channel antagonists  
 INVENTOR(S): Nakanishi, Chika; Masuzawa, Yoko; Hagihara, Masako;  
 Yamamoto, Takashi; Matsueda, Hiroyuki; Ohno, Seiji;  
 Niwa, Seiji; Kito, Morikazu; Takahara, Akira; Ono,  
 Yukitsugu; Takeda, Tomoko; Kajigaya, Yuki; Koganei,  
 Hajime  
 PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan  
 SOURCE: PCT Int. Appl., 152 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000078719	A1	20001228	WO 2000-JP4105	20000622
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1191021	A1	20020327	EP 2000-940810	20000622
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2002147222	A1	20021010	US 2001-22874	20011220
PRIORITY APPLN. INFO.:			JP 1999-177491	19990623
			WO 2000-JP4105	20000622

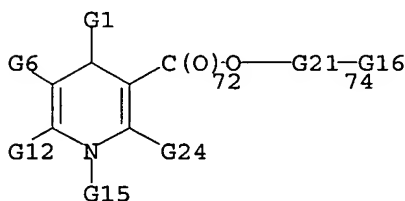
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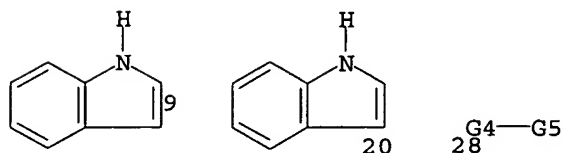
AB Title compds. [I; R = CH<sub>3</sub>, substituted alkyl; R<sub>1</sub> = CH<sub>3</sub>, C<sub>6</sub>H<sub>5</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>, CH<sub>3</sub>OCH<sub>2</sub>, CH<sub>3</sub>CH<sub>2</sub>, CH<sub>2</sub>O(CH<sub>2</sub>)<sub>2</sub>OCH<sub>2</sub>C<sub>6</sub>H<sub>5</sub>; R<sub>2</sub> = 3-Cl, 2-NO<sub>2</sub>, 3-NO<sub>2</sub>, 3-COOH; R<sub>3</sub> = H, (C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>CH, (C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>CHCH<sub>2</sub>CH:CH, (C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>(HO)C; R<sub>4</sub> = COOH, CONH<sub>2</sub>, CN, CONH(CH<sub>2</sub>)<sub>2</sub>N(CH<sub>3</sub>)<sub>2</sub>; n = 0, 1, 2, 3; etc], analogs and pharmaceutically acceptable salts are prepared and are showing a selective N-type calcium channel inhibitory activity. Title compds. are usable as remedies for various diseases in which N-type calcium channel participates. Thus, the title compound I (R = CH<sub>3</sub>; R<sub>1</sub> = CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>N(CH<sub>2</sub>)<sub>5</sub>; R<sub>2</sub> = 3-Cl; R<sub>3</sub> = H; R<sub>4</sub> = OH; n = 2) was prepared

REFERENCE COUNT: 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

## MSTR 1



G1 = Ph (opt. substd. by 1 or more G2) / naphthyl / thienyl / furyl / pyridyl / 9 / 20 / 28

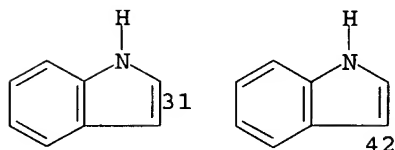


G2 = F / Cl / Br / I / OH / CO<sub>2</sub>H / NH<sub>2</sub> / CN / NO<sub>2</sub> / alkyl <containing 1-7 C> (opt. substd. by OH) / alkoxy <containing 1-7 C> (opt. substd. by OH) / alkenyl <containing 2-7 C> (opt. substd. by OH) / alkynyl <containing 2-7 C> / alkylamino <containing 1-7 C> / dialkylamino <each alkyl containing 1-7 C> / alkylthio <containing 1-7 C> / alkylcarbonyl <containing 1-7 C> / alkoxycarbonyl <containing 1-7 C> / alkyl <containing 1-7 C> (substd. by 1 or more G3) / alkoxy <containing 1-7 C> (substd. by 1 or more G3) / alkenyl <containing 2-7 C> (substd. by 1 or more G3) / aryl (opt. substd.) / alkoxy <containing 1-7 C> (substd. by 1 or more aryl (opt. substd.)) / arylcarbonyl (opt. substd.)

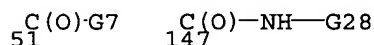
G3 = F / Cl / Br / I

G4 = CH<sub>2</sub> / CH<sub>2</sub>CH<sub>2</sub> / CH=CH / ethynylene

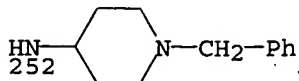
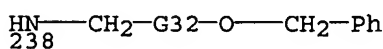
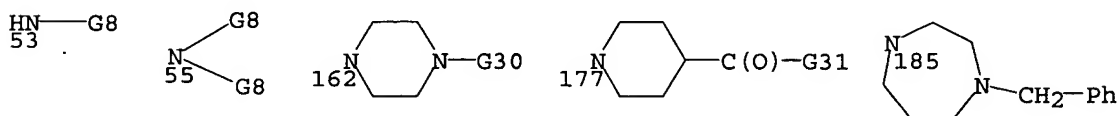
G5 = Ph (opt. substd. by 1 or more G2) / naphthyl / thienyl / furyl / pyridyl / 31 / 42



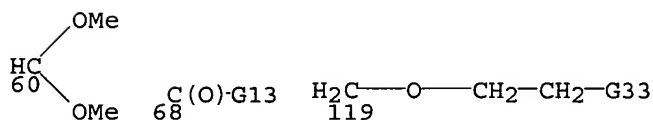
G6 = CN / NO<sub>2</sub> / CO<sub>2</sub>H / COMe / 51 / (Example: 147)



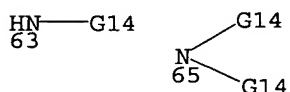
G7 = NH<sub>2</sub> / 53 / 55 / heterocycle <containing 1 or more N, attached through 1 or more N> (opt. substd.) / (Examples: 162 / hexahydroazepino / 177 / 185 / 238 / 252)



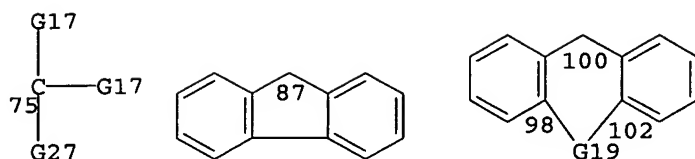
- G8 = alkyl <containing 1-7 C> (opt. substd. by G9) /  
 alkyl <containing 1-7 C> (substd. by CO<sub>2</sub>H) /  
 alkyl <containing 1-7 C> (substd. by OH) /  
 cycloalkyl <containing 3-8 C> /  
 heterocycle <containing 3-8 atoms, saturated> /  
 alkenyl <containing 2-7 C> (substd. by NH<sub>2</sub>) /  
 alkenyl <containing 2-7 C> (substd. by CO<sub>2</sub>H) /  
 alkenyl <containing 2-7 C> (substd. by OH) /  
 aryl (opt. substd.) / heteroaryl (opt. substd.) /  
 alkyl <containing 1-7 C> (substd. by 1 or more aryl (opt. substd.)) / alkyl <containing 1-7 C> (substd. by heteroaryl (opt. substd.)) /  
 alkyl <containing 1-7 C> (substd. by G10) /  
 alkenyl <containing 2-7 C> (substd. by aryl (opt. substd.)) /  
 alkyl <containing 1-7 C> (substd. by G11)
- G9 = NH<sub>2</sub> / alkylamino <containing 1-7 C> /  
 dialkylamino <each alkyl containing 1-7 C>
- G10 = cycloalkyl / heterocycle <saturated>
- G11 = alkoxycarbonyl <containing 1-7 C> (substd. by aryl (opt. substd.))
- G12 = H / alkyl <containing 1-7 C> (opt. substd. by OH) /  
 60 / CN / alkyl <containing 1-7 C> (substd. by CO<sub>2</sub>H) /  
 alkyl <containing 1-7 C> (substd. by 1 or more G3) /  
 alkyl <containing 1-7 C> (substd. by G13) /  
 alkyl <containing 1-7 C> (substd. by N3) /  
 aryl (opt. substd.) / heteroaryl (opt. substd.) /  
 alkyl <containing 1-7 C> (substd. by 1 or more aryl (opt. substd.)) / alkyl <containing 1-7 C> (substd. by heteroaryl (opt. substd.)) /  
 alkyl <containing 1-7 C> (substd. by G10) /  
 alkyl <containing 1-7 C> (substd. by 68) /  
 (Specifically claimed: Me / Et / 119) / (Example: CF<sub>3</sub>)



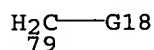
- G13 = NH<sub>2</sub> / 63 / 65



- G14 = alkyl <containing 1-7 C> (opt. substd. by 1 or more aryl (opt. substd.)) /  
 cycloalkyl <containing 3-8 C> /  
 heterocycle <containing 3-8 atoms, saturated> /  
 aryl (opt. substd.)
- G15 = H / alkyl <containing 1-7 C> (opt. substd. by OH) /  
 alkyl <containing 1-7 C> (substd. by 1 or more aryl (opt. substd.))
- G16 = 75 / 87 / 100 / heterocycle <containing 1-2 N,  
 0-1 S, 0-1 O, 11-14 C, attached through 1 or more C,  
 12 normalized bonds, up to 1 double bond, tricyclic,  
 (up to 1) 5-membered, 2 or more 6-membered,  
 (up to 1) 7-membered rings>

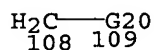


G17 = Ph / 79 / naphthyl / thienyl / furyl / pyridyl



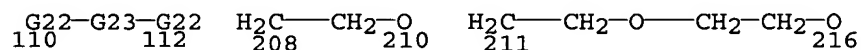
G18 = Ph / pyridyl

G19 = CH2 / NH / O / S / 108-98 109-102 / CH=CH



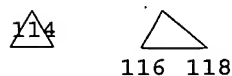
G20 = CH2 / NH / O / S

G21 = alkylene <containing 1-7 C> /  
alkenylene <containing 2-7 C> / 110-72 112-74 /  
(Examples: 208-72 210-74 / 211-72 216-74 )

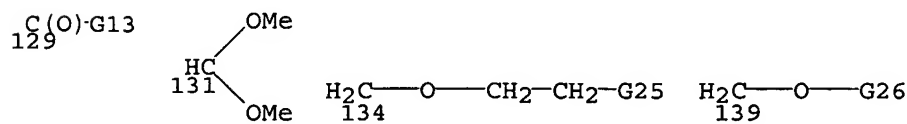


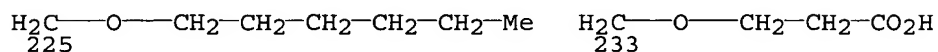
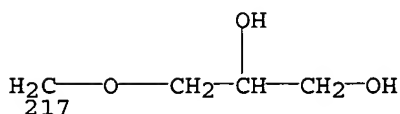
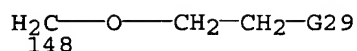
G22 = alkylene <containing 1-7 C> /  
alkenylene <containing 2-7 C>

G23 = 114 / 116-110 118-112 / R <"heteroatom">

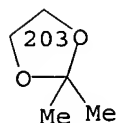


G24 = H / alkyl <containing 1-7 C> (opt. substd. by OH) /  
131 / CN / alkyl <containing 1-7 C> (substd. by CO2H) /  
alkyl <containing 1-7 C> (substd. by 1 or more G3) /  
alkyl <containing 1-7 C> (substd. by G13) /  
alkyl <containing 1-7 C> (substd. by N3) /  
aryl (opt. substd.) / heteroaryl (opt. substd.) /  
alkyl <containing 1-7 C> (substd. by 1 or more aryl (opt.  
substd.)) / alkyl <containing 1-7 C>  
(substd. by heteroaryl (opt. substd.)) /  
alkyl <containing 1-7 C> (substd. by G10) /  
alkyl <containing 1-7 C> (substd. by 129) /  
(Specifically claimed: Me / Et / 134 / CH2OMe / 139) /  
(Examples: 148 / 217 / 225 / 233 / CF3)

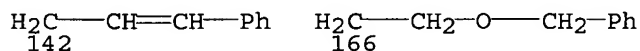




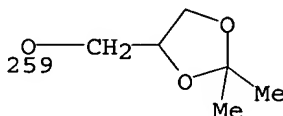
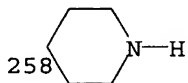
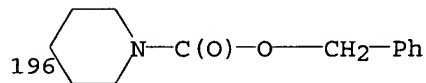
- G25 = piperidino / hexahydroazepino / OCH<sub>2</sub>Ph / 2-pyridyl / OH  
 G26 = alkyl <containing 1-7 C> (opt. substd. by OH) / alkyl <containing 1-7 C> (substd. by 1 or more aryl (opt. substd.)) / alkyl <containing 1-7 C> (substd. by heteroaryl) / alkyl (substd. by G10) / (Example: 203)



- G27 = H / OH  
 G28 = 142 / 166



- G29 = pyrrolidino / morpholino / 3-pyridyl / 258 / 196 / N3 / NH<sub>2</sub> / cyclohexyl / 4-pyridyl / 259



- G30 = CO<sub>2</sub>Bu-t / CH<sub>2</sub>Ph / Ph / 2-pyridyl / H / CHPh<sub>2</sub>  
 G31 = OCH<sub>2</sub>Ph / OH  
 G32 = CH<sub>2</sub> / C(O)  
 G33 = piperidino / (Examples: pyrrolidino / morpholino / 3-pyridyl)

Patent location:

claim 1

Note:

or pharmaceutically acceptable salts

Note:

additional interruptions of Alkyl in G12 and G24 also claimed

L29 ANSWER 21 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 132:321860 MARPAT

TITLE: Preparation of 2-phenylbenzimidazoles as poly(ADP-ribose) polymerase inhibitors.

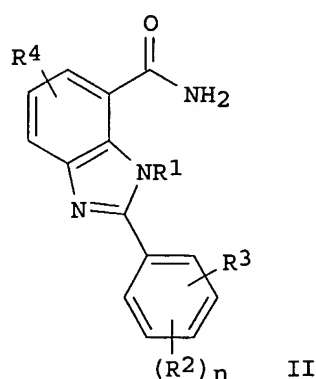
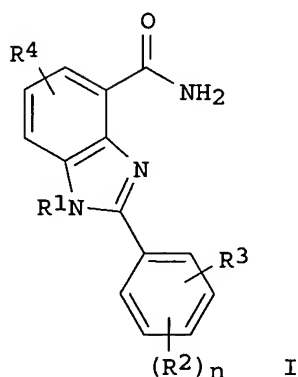
INVENTOR(S): Lubisch, Wilfried; Kock, Michael; Hoger, Thomas



PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany  
 SOURCE: PCT Int. Appl., 75 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 2000026192	A1	20000511	WO 1999-EP8169	19991028	
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG					
CA 2349227	AA	20000511	CA 1999-2349227	19991028	
BR 9915013	A	20010807	BR 1999-15013	19991028	
EP 1127052	A1	20010829	EP 1999-955894	19991028	
EP 1127052	B1	20041208			
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TR 200101239	T2	20011121	TR 2001-200101239	19991028	
TR 200200972	T2	20020722	TR 2002-200200972	19991028	
JP 2002528531	T2	20020903	JP 2000-579581	19991028	
AU 765224	B2	20030911	AU 2000-12665	19991028	
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AT 284392	E	20041215	AT 1999-955894	19991028	
ES 2234318	T3	20050616	ES 1999-955894	19991028	
NO 2001002158	A	20010626	NO 2001-2158	20010502	
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BG 105515	A	20011231	BG 2001-105515	20010516	
PRIORITY APPLN. INFO.:					
				DE 1998-19850709	19981103
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				EP 1999-955894	19991028
				WO 1999-EP8169	19991028

GI



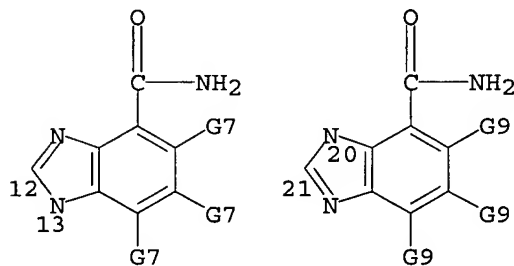
AB Title compds. [I, II; R1 = H, (substituted) alkyl; R2 = H, Cl, Br, iodo, F, CF<sub>3</sub>, NO<sub>2</sub>, acylamino, amino, OH, alkoxy, phenylalkoxy, (substituted) Ph, etc.; n = 0-2; R3 = D(F1)pEq(F2)rG, EDu(F2)sGv, etc.; R4 = H, Cl, F, Br, iodo, alkyl, OH, NO<sub>2</sub>, CF<sub>3</sub>, cyano, amino, acylamino, alkoxy; D = S, O; E = Ph, imidazolyl, pyrrolyl, thienyl, pyridyl, isoxazolyl, etc.; F1, F2 = (substituted) C1-8 chain; p, q, r, s, u, v = 0, 1; G = amino, (substituted) pyrrolidiny, piperidiny, piperaziny, azepiny, diazepiny, morpholino], were prepared as drugs (no data). Thus, Et 2,3-diaminobenzoate and HOAc in MeOH were treated with 4-(N,N-diethylaminoeth-1-yloxy)benzaldehyde (preparation given) in MeOH over 30 min.; CuOAc in H<sub>2</sub>O was added and the mixture was refluxed 20 min. to to give Et 2-[4-[2-(N,N-diethylamino)eth-1-yloxy]phenyl]benzimidazole-4-carboxylate. This was refluxed 10 h with N<sub>2</sub>H<sub>4</sub> in EtOH to give the hydrazide, which was heated with Raney Ni in DMF/H<sub>2</sub>O to give 2-[4-[2-(N,N-diethylamino)eth-1-yloxy]phenyl]benzimidazole-4-carboxamide.

REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

## MSTR 1

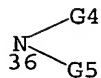
G10-G1-G2-G19  
1 3

G1 = 13-1 12-3 / 20-1 21-3



G2 = phenylene (opt. substd. by (up to 2) G3)

G3 = Cl / Br / I / F / CF<sub>3</sub> / NO<sub>2</sub> / NHCHO /  
alkylcarbonylamino <containing 1-4 C> / 36 / OH /  
alkoxy <containing 1-4 C> (opt. substd. by Ph) / NH<sub>2</sub> /  
Ph (opt. substd. by (up to 2) G6)



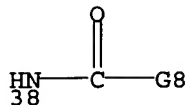
G4 = H / alkyl <containing 1-4 C>

G5 = H / alkyl <containing 1-4 C> / Ph

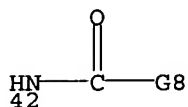
G6 = OH / alkyl <containing 1-6 C> /  
alkoxy <containing 1-4 C> / Cl / Br / I / F / CF<sub>3</sub> / NO<sub>2</sub> /  
NH<sub>2</sub>

G7 = 2 or more H / Cl / F / Br / I /  
alkyl <containing 1-6 C> / OH / NO<sub>2</sub> / CF<sub>3</sub> / CN / NH<sub>2</sub> /  
alkylamino <containing 1-4 C> /

dialkylamino <each alkyl containing 1-4 C> / 38 /  
alkoxy <containing 1-4 C>



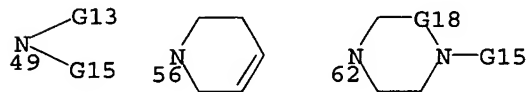
- G8 = H / alkyl <containing 1-4 C> (opt. substd. by Ph) /  
Ph  
G9 = 2 or more H / Cl / F / Br / I /  
alkyl <containing 1-6 C> / OH / NO2 / CF3 / CN / NH2 /  
alkylamino <containing 1-4 C> /  
dialkylamino <each alkyl containing 1-4 C> / 42 /  
alkoxy <containing 1-4 C>



- G10 = H / 46

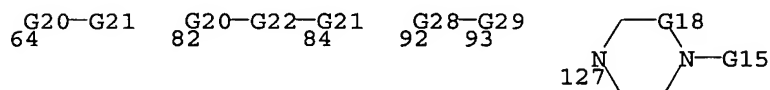
G11-G12  
46

- G11 = alkylene <containing 1-6 C>  
G12 = H / OH / alkoxy <containing 1-4 C> / 49 /  
pyrrolidino / piperidino / 56 / 62 / hexahydroazepino /  
morpholino



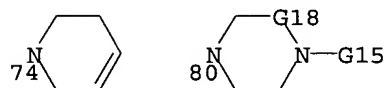
- G13 = H / alkyl <containing 1-6 C> /  
alkyl <containing 1-4 C> (substd. by Ph) /  
Ph (opt. substd. by (1-2) G14)  
G14 = OH / alkyl <containing 1-6 C> /  
alkoxy <containing 1-4 C> / Cl / Br / I / F / CF3 / NO2 /  
NH2  
G15 = H / COMe / alkoxycarbonyl <containing 1-4 C> /  
COCF3 / alkyl <containing 1-6 C> (opt. substd. by (1-2) G16)  
G16 = OH / alkoxy <containing 1-4 C> /  
Ph (opt. substd. by (1-2) G17)  
G17 = I / Cl / Br / F / alkyl <containing 1-6 C> / NO2 /  
NH2 / alkylamino <containing 1-4 C> /  
dialkylamino <each alkyl containing 1-4 C> / OH /  
alkoxy <containing 1-4 C> / CN / CF3 /  
alkylsulfonyl <containing 1-4 C>  
G18 = (1-2) CH2  
G19 = 64 / 82 / Ph (opt. substd.) /  
heterocycle <containing 1-2 heteroatoms, up to 2 N,  
up to 1 O, up to 1 S (no other heteroatoms),

5- to 7-membered monocyclic ring> (opt. substd.) /  
(Specifically claimed: 92 / 127)

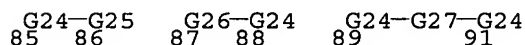


G20 = O / S

G21 = NH2 (opt. substd.) / pyrrolidino / piperidino / 74 /  
80 / hexahydroazepino / morpholino



G22 = carbon chain <containing 1-16 C>  
(opt. substd. by G23) / phenylene (opt. substd.) /  
heterocycle <containing 1-2 heteroatoms, up to 2 N,  
up to 1 O, up to 1 S (no other heteroatoms),  
5- to 7-membered monocyclic ring> (opt. substd.) /  
85-82 86-84 / 87-82 88-84 / 89-82 91-84



G23 = OH / alkoxy <containing 1-4 C>

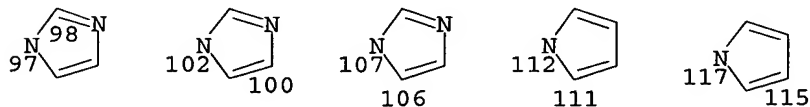
G24 = carbon chain <containing 1-8 C>  
(opt. substd. by G23)

G25 = phenylene (opt. substd.) /  
heterocycle <containing 1-2 heteroatoms, up to 2 N,  
up to 1 O, up to 1 S (no other heteroatoms),  
5- to 7-membered monocyclic ring> (opt. substd.)

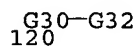
G26 = phenylene (opt. substd.) /  
heterocycle <containing 1-2 heteroatoms, up to 2 N,  
up to 1 O, up to 1 S (no other heteroatoms),  
5- to 7-membered monocyclic ring> (opt. substd.)

G27 = phenylene (opt. substd.) /  
heterocycle <containing 1-2 heteroatoms, up to 2 N,  
up to 1 O, up to 1 S (no other heteroatoms),  
5- to 7-membered monocyclic ring> (opt. substd.)

G28 = 97-3 98-93 / 102-3 100-93 / 107-3 106-93 /  
112-3 111-93 / 117-3 115-93

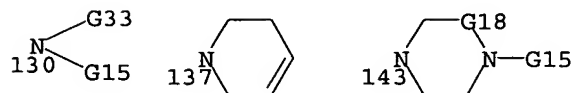


G29 = H / CHO / 120



G30 = alkylene <containing 1-8 C, unbranched>

(opt. substd. by (1-2) G31)  
 G31 = H / alkyl <containing 1-4 C> / OH /  
 alkoxy <containing 1-4 C>  
 G32 = 130 / pyrrolidino / piperidino / 137 / 143 /  
 hexahydroazepino / morpholino



G33 = H / alkyl <containing 1-6 C>  
 Derivative: and tautomers, prodrugs, and pharmacologically  
 acceptable salts  
 Patent location: claim 1  
 Stereochemistry: and enantiomeric and distereomeric forms

L29 ANSWER 22 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 132:293757 MARPAT  
 TITLE: Preparation of novel 4,5-dihydroisoxazole derivatives  
 and their use as pharmaceuticals for T cell-mediated  
 diseases  
 INVENTOR(S): Freyne, Eddy Jean Edgard; Andres-Gil, Jose Ignacio;  
 Deroose, Frederik Dirk; Petit, Davy Petrus Franciscus  
 Maria; Matesanz-Ballesteros, Maria Encarnacion;  
 Alvarez Escobar, Rosa Maria  
 PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.  
 SOURCE: PCT Int. Appl., 108 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

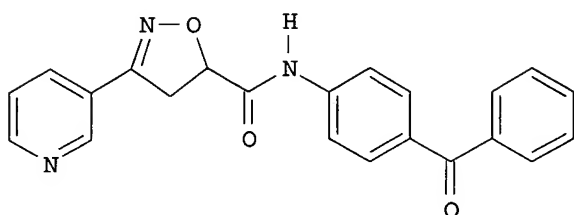
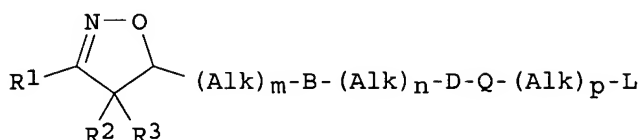
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AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW:				
GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2346396	AA	20000420	CA 1999-2346396	19991007
EP 1119568	A1	20010801	EP 1999-953847	19991007
EP 1119568	B1	20040218		
R:				
AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002527438	T2	20020827	JP 2000-575865	19991007
AU 763460	B2	20030724	AU 2000-10393	19991007
AT 259803	E	20040315	AT 1999-953847	19991007
ES 2216579	T3	20041016	ES 1999-953847	19991007
US 6583141	B1	20030624	US 2001-807149	20010406
HK 1038565	A1	20040618	HK 2002-100274	20020115

US 2004019059  
PRIORITY APPLN. INFO.:

A1 20040129

US 2003-403543 20030331  
EP 1998-203394 19981009  
WO 1999-EP7803 19991007  
US 2001-807149 20010406

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AB The invention concerns title compds. I and their N-oxides, pharmaceutically acceptable addition salts, quaternary ammonium salts, and stereochem. isomeric forms [wherein m, n, p = 0 or 1; R1 = (un)substituted pyridinyl, pyridazinyl, pyrimidinyl, pyrazinyl or phenyl; B = amide, ketone, or oxadiazole; D = (un)substituted aryl or heterocyclyl; Q = bond, CO, (un)substituted NH, CONH, CH2, CH(:CH2), C(:NH), SO, SO, 3-oxobutenyl, pyrazole, isoxazole, or thiazole nucleus; L = (un)substituted aryl or heteroaryl; R2, R3 = H, halo, C1-6 alkyloxy, or (un)substituted C1-6 alkyl]. Also disclosed is a process for their preparation, compns. comprising them, and their medical use. The compds. show growth inhibitory activity against T cell blasts and keratinocytes in vitro. The compds. are claimed for use in the treatment of prevention of rheumatic, arthritic, and inflammatory diseases, psoriasis, T cell leukemia, transplant rejection, and graft-vs.-host disease. For instance, base-catalyzed cycloaddn. of N-hydroxy-3-pyridinecarboximidoyl chloride with Me 2-propenoate gave 98% Me 4,5-dihydro-3-(3-pyridinyl)-5-isoxazolecarboxylate, which was amidated with (4-aminophenyl)phenylmethanone to give 58% title compound II. At a concentration of 10-6 M, II gave 81% inhibition of T cell blast formation in human whole blood.

REFERENCE COUNT:

6

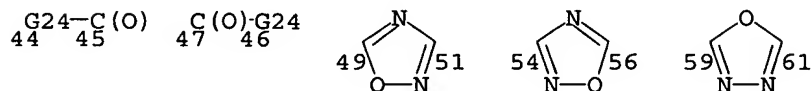
THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

MSTR 5A

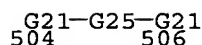
G5—G7—G6—G8—G10—G6—G20  
39 41 42 43 63

G3 = F / Cl / Br / I / alkoxy <containing 1-6 C> / OH  
G4 = F / Cl / Br / I

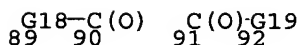
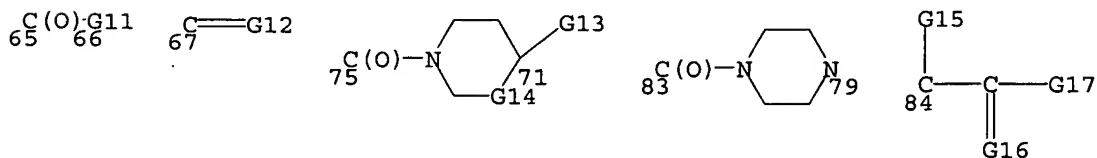
- G5 = alkenyl <containing 2 or more C, 1 double bond>  
(opt. substd. by 1 or more G3)  
G6 = bond / alkylene <containing 1-3 C>  
G7 = 44-39 45-41 / 47-39 46-41 / C(O) / 49-39 51-41 /  
54-39 56-41 / 59-39 61-41



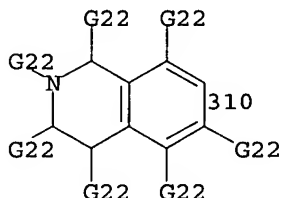
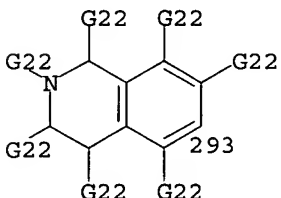
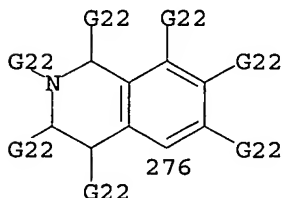
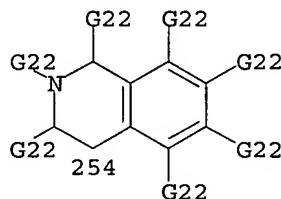
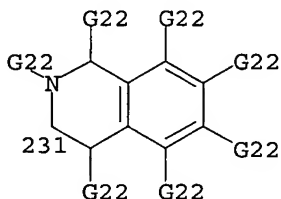
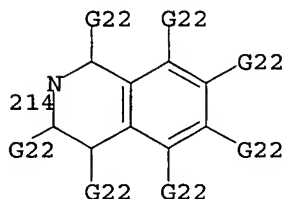
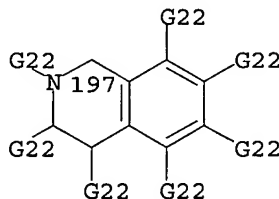
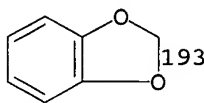
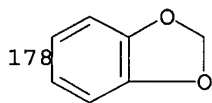
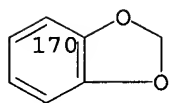
- G8 = arylene <containing 6-14 C>  
(opt. substd. by 1 or more G9) / 504-41 506-43 /  
heterocycle <containing zero or more O, zero or more S,  
zero or more N (no other heteroatoms), 1-14 C>  
(opt. substd. by 1 or more G9) /  
**(Specifically claimed: phenylene (opt. substd. by 1 or more  
G4) / heterocycle <containing 6 atoms, 1 heteroatom,  
1 N (no other heteroatoms), 5 C, aromatic,  
6 normalized bonds, 6-membered monocyclic ring>)**



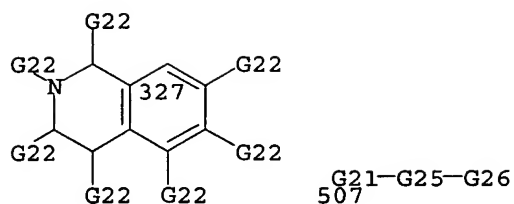
- G9 = F / Cl / Br / I / OH /  
alkyl <containing 1-6 C> (opt. substd.) /  
alkenyl <containing 2-6 C> (opt. substd.) /  
alkynyl <containing 2-6 C> (opt. substd.) /  
cycloalkyl <containing 3-6 C> (opt. substd.) /  
cycloalkenyl <containing 3-6 C> (opt. substd.) /  
alkoxy <containing 1-6 C> (opt. substd.) /  
heterocycle <containing zero or more O, zero or more S,  
zero or more N (no other heteroatoms), 1-14 C>  
G10 = 67 / S / O / alkylidene <containing 1 or more C>  
(opt. substd.) / heterocycle <containing zero or more O,  
zero or more S, zero or more N (no other heteroatoms),  
1-14 C, attached through 1 or more C> (opt. substd.) /  
carbocycle <containing 3-14 C> (opt. substd.) /  
NH (opt. substd.) / 65-42 66-63 / 75-42 71-63 /  
83-42 79-63 / SO2 / S(O) / 84 /  
heterocycle <containing 5 atoms, 1-3 heteroatoms, 0-3 N,  
0-1 O, 0-1 S (no other heteroatoms),  
attached through 2 or more C, 0 or more N,  
1 or more double bonds, 5-membered monocyclic ring>  
(opt. substd.) / 89-42 90-63 / 91-42 92-63



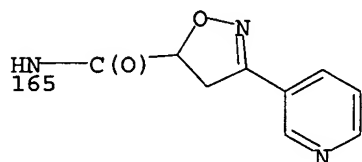
- G11 = NH (opt. substd.)  
 G12 = O / alkylidene <containing 1 or more C> (opt. substd.) / heterocycle <containing zero or more O, zero or more S, zero or more N (no other heteroatoms), 1-14 C, attached through 1 or more C> (opt. substd.) / carbocycle <containing 3-14 C> (opt. substd.) / NH (opt. substd.)  
 G13 = H / OH  
 G14 = (0-2) CH<sub>2</sub>  
 G15 = H / R  
 G16 = O / S  
 G17 = NH<sub>2</sub> (opt. substd.) / heterocycle <containing 1-14 C, 1 or more N, zero or more O, zero or more S (no other heteroatoms), attached through 1 or more N>  
 G18 = alkylene <containing 1-4 C> / alkenylene <containing 2-4 C>  
 G19 = alkenylene <containing 2-4 C>  
 G20 = aryl <containing 6-14 C> (opt. substd. by 1 or more G9) / 507 / heterocycle <containing zero or more O, zero or more S, zero or more N (no other heteroatoms), 1-14 C> (opt. substd. by 1 or more G9) / **(Specifically claimed: Ph (opt. substd. by 1 or more G23) / naphthyl / pyridyl / furyl / thienyl / 170 / 178 / 193 / 197 / 214 / 231 / 254 / 276 / 293 / 310 / 327)**







G21 = arylene <containing 6-14 C> (opt. substd.)  
 G22 = H / alkoxy <containing 1-3 C>  
 G23 = F / Cl / Br / I / alkoxy <containing 1-3 C> /  
 alkyl <containing 1-3 C> (opt. substd. by 1 or more G4) /  
 NH2 / alkylamino <containing 1-3 C> /  
 dialkylamino <each alkyl containing 1-3 C> / CONH2 /  
 alkylaminocarbonyl <containing 1-3 C> /  
 dialkylaminocarbonyl <each alkyl containing 1-3 C> /  
 alkylsulfonyl <containing 1-3 C>  
 (opt. substd. by 1 or more G4) / 165



G24 = NH (opt. substd.)  
 G25 = bond / R <"linking group">  
 G26 = aryl <containing 6-14 C> (opt. substd.)  
 Derivative: or N-oxides, addition salts or quaternary amines  
 Patent location: claim 1  
 Stereochemistry: or stereochemically isomeric forms

L29 ANSWER 23 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 132:36535 MARPAT  
 TITLE: Polymer compositions stabilized by a dioxopiperazinyl  
 derivative  
 INVENTOR(S): Zedda, Alessandro; Zagnoni, Graziano; Sala,  
 Massimiliano; Lazzari, Dario; Andrews, Stephen Mark  
 PATENT ASSIGNEE(S): Ciba Specialty Chemicals Holding Inc., Switz.  
 SOURCE: Ger. Offen., 82 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

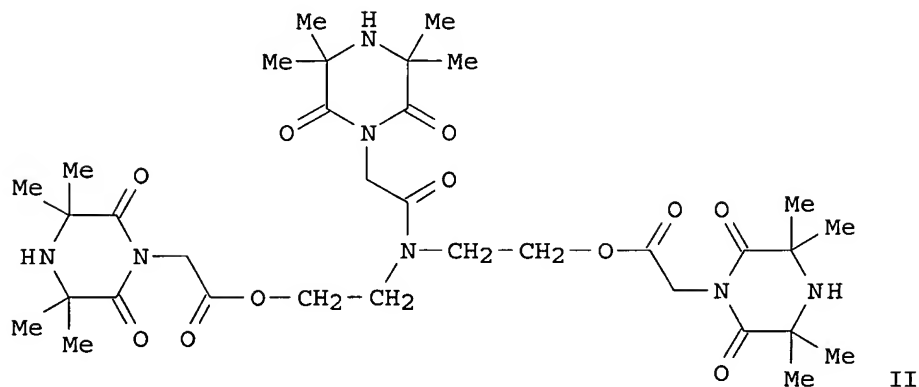
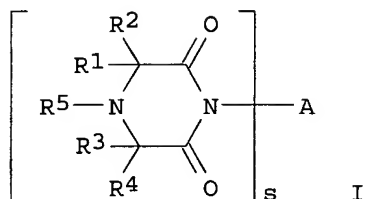
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19924984	A1	19991209	DE 1999-19924984	19990531
TW 482806	B	20020411	TW 1999-88107573	19990510
KR 2000005739	A	20000125	KR 1999-19518	19990528
CA 2273386	AA	19991202	CA 1999-2273386	19990531
NL 1012190	A1	19991203	NL 1999-1012190	19990531
NL 1012190	C2	20001130		
BE 1012760	A3	20010306	BE 1999-375	19990531

ES 2159469	A1	20011001	ES 1999-1179	19990531
ES 2159469	B1	20020416		
FR 2779150	A1	19991203	FR 1999-6862	19990601
FR 2779150	B1	20020517		
JP 2000063742	A2	20000229	JP 1999-153870	19990601
GB 2350838	A1	20001213	GB 1999-13511	19990611
GB 2350838	B2	20020403		
GB 2371543	A1	20020731	GB 2001-25901	19990611
GB 2371543	B2	20030115		
US 2002086921	A1	20020704	US 2001-826404	20010402
US 2003139500	A1	20030724	US 2002-272193	20021015
US 6762226	B2	20040713		

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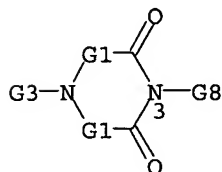
EP 1998-810507	19980602
US 1999-315703	19990520
GB 1999-13511	19990611
US 2001-826404	20010402

GI

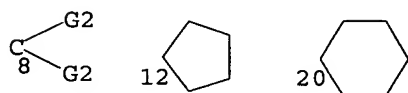


AB The title piperazinyll derivs. [I; R1, R2, R3, R4 = C1-4-alkyl; R1R2 or R3R4 form cyclopentyl or cyclohexyl ring; R5 = H, oxyl, OH, CH2CN, C1-18-alkyl or -alkoxy, C5-12-cycloalkoxy, C3-8-alkenyl or alkynyl, phenylalkyl (optionally ring-substituted), C1-8-alkanoyl or alkanoyloxy, C3-5-alkenoyl, glycidyl, CH2CH(OH)G; G = H, Me, Ph; A = mono- or polyvalent organocarbyl, including triazine ring-containing chains with spacer groups for linking to the piperazinyll ring; s = 1-8] are light stabilizers, antioxidants, and/or heat stabilizers for synthetic organic polymers such as polyoxymethylenes, polycarbonate/ABS blends, and acrylic coatings. The stabilizers can be used alone or in combination with other stabilizers. Thus, a gray-pigmented polycarbonate/ABS blend (Cycoloy MC

8002) containing 0.5% II and 1% (2-hydroxyphenyl)benzotriazole derivative stabilizer showed 0.5, 3.1, 6.2, and 7.2 units color change after accelerated aging for 94.8, 500.5, 999.7, and 1249.0 h. The color change was less than that observed for pigmented blends containing no stabilizer or containing the benzotriazole stabilizer alone.

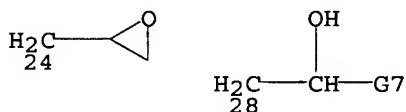
**MSTR 1A**

G1 = 8 / 12 / 20



G2 = alkyl <containing 1-4 C>

G3 = H / alkyl <containing 1-18 C> / O / OH / CH<sub>2</sub>CN /  
 alkoxy <containing 1-18 C> / cycloalkyloxy <containing 5-12 C> /  
 alkenyl <containing 3-8 C> /  
 alkynyl <containing 3-8 C> / **alkyl <containing 1-6 C>**  
 (substd. by Ph) / alkyl <containing 1-9 C> (substd. by G4) /  
 alkoxy <containing 1-9 C> (substd. by G6) / CHO /  
 alkylcarbonyl <containing 1-7 C> /  
 alkenylcarbonyl <containing 2-4 C> / OCHO /  
 alkylcarbonyloxy <containing 1-17 C> / 24 / 28



G4 = Ph (substd. by (1-3) G5)

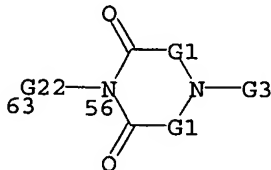
G5 = alkyl <containing 1-4 C> /  
 alkoxy <containing 1-4 C>

G6 = Ph (opt. substd. by (1-3) G5)

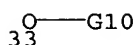
G7 = H / Me / Ph

G8 = alkyl <containing 1-18 C> /  
 alkyl <containing 2-18 C> (substd. by G9) / 48 / 63

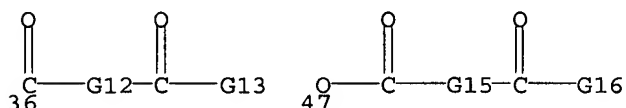
G17-G18  
 48



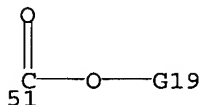
G9 = NH<sub>2</sub> / OH / halo / 33



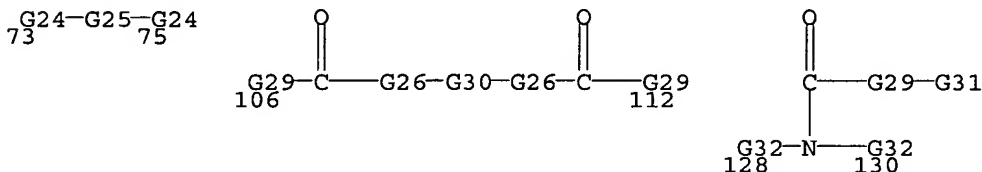
- G10 = alkyl <containing 1-8 C>  
 (opt. substd. by 1 or more G11) / CHO /  
 alkylcarbonyl <containing 1-7 C>  
 (opt. substd. by 1 or more G11) /  
 cycloalkyl <containing 5-12 C> /  
 alkyl <containing 1-6 C> (substd. by G21)
- G11 = OH / alkoxy <containing 1-12 C> / 36 / 47

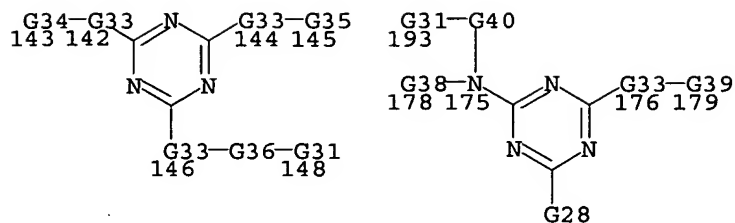


- G12 = phenylene (opt. substd. by 1 or more G14)  
 G13 = Ph (opt. substd. by 1 or more G14)  
 G14 = OH / halo / alkyl <containing 1-4 C> /  
 alkoxy <containing 1-18 C>  
 G15 = phenylene (opt. substd. by 1 or more G14)  
 G16 = Ph (opt. substd. by 1 or more G14)  
 G17 = alkyl <containing 1-18 C>  
 G18 = 51 / Ph

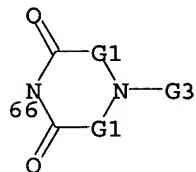


- G19 = alkyl <containing 1-18 C>  
 (opt. substd. by 1 or more G20) /  
 alkenyl <containing 3-18 C> / cycloalkyl <containing 5-12 C>  
 (opt. substd. by alkyl <containing 1-4 C>) /  
 heterocycle <containing 1 O, 4-11 C (no other heteroatoms),  
 non-aromatic, saturated> (opt. substd. by alkyl <containing  
 1-4 C>)
- G20 = NH2 (opt. substd.) / NO2 / OH /  
 alkoxy <containing 1-18 C>
- G21 = Ph (opt. substd. by G5)
- G22 = carbon chain <containing 2-10 C, saturated>  
 (opt. substd. by 1 or more G23) / 73-3 75-56 /  
 106-3 112-56 / 128-3 130-56 / 143-3 145-56 /  
 178-3 179-56 / 213-3 215-56

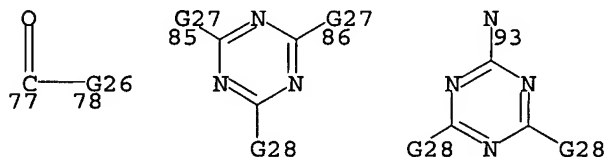




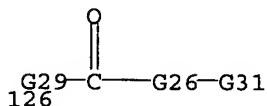
G23 = (up to 6) 66 / OH



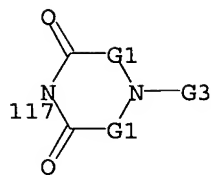
G24 = alkylene <containing 1-8 C> (opt. substd. by OH)  
 G25 = O / phenylene (opt. substd. by alkyl <containing 1-4 C>) / 77-73 78-75 / 85-73 86-75 / 93



G26 = O / NH  
 G27 = O / NH (opt. substd.)  
 G28 = halo / NH2 (opt. substd.) / alkoxy <containing 1-4 C>  
 G29 = alkylene <containing 1-4 C>  
 G30 = carbon chain <containing 3-12 C, saturated> (substd. by (1-4) 126)

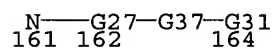


G31 = 117

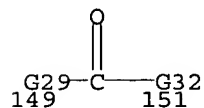


G32 = alkylene <containing 2-12 C> (opt. substd. by OH)

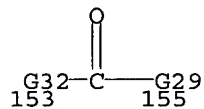
G33 = O / NH (opt. substd.) / 161



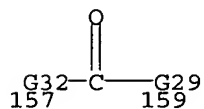
G34 = alkylene <containing 2-12 C> (opt. substd. by OH) /  
149-3 151-142



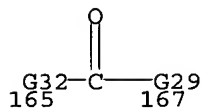
G35 = alkylene <containing 2-12 C> (opt. substd. by OH) /  
153-144 155-56



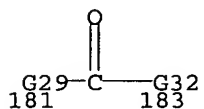
G36 = alkylene <containing 2-12 C> (opt. substd. by OH) /  
157-146 159-148



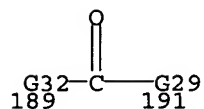
G37 = alkylene <containing 2-12 C> (opt. substd. by OH) /  
165-162 167-164



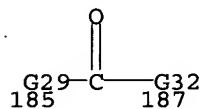
G38 = alkylene <containing 2-12 C> (opt. substd. by OH) /  
181-3 183-175



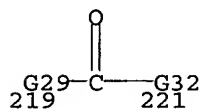
G39 = alkylene <containing 2-12 C> (opt. substd. by OH) /  
189-176 191-56



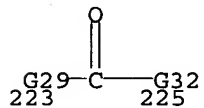
G40 = alkylene <containing 2-12 C> (opt. substd. by OH) /  
185-193 187-175



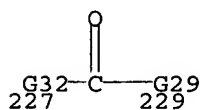
G41 = alkylene <containing 2-12 C> (opt. substd. by OH) /  
219-3 221-209



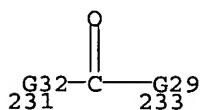
G42 = alkylene <containing 2-12 C> (opt. substd. by OH) /  
223-217 225-210



G43 = alkylene <containing 2-12 C> (opt. substd. by OH) /  
227-211 229-56



G44 = alkylene <containing 2-12 C> (opt. substd. by OH) /  
231-212 233-218



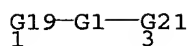
Patent location:

claim 1

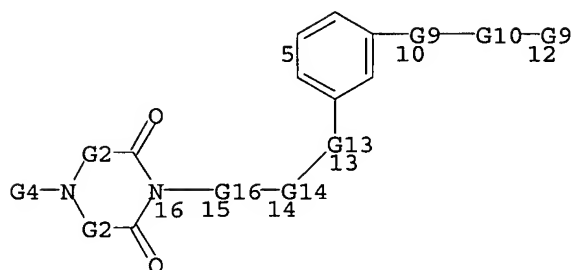
Note:

oxygen alternative in G3 is free radical

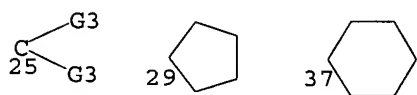
MSTR 2



G1 = (1-2) 5-1 12-3

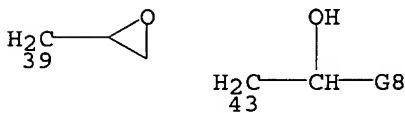


G2 = 25 / 29 / 37



G3 = alkyl <containing 1-4 C>

G4 = H / alkyl <containing 1-18 C> / O / OH / CH<sub>2</sub>CN /  
alkoxy <containing 1-18 C> / cycloalkyloxy <containing 5-12 C> / alkenyl <containing 3-8 C> /  
alkynyl <containing 3-8 C> / **alkyl <containing 1-6 C>**  
**(substd. by Ph)** / alkyl <containing 1-9 C> (substd. by G5) /  
alkoxy <containing 1-9 C> (substd. by G7) / CHO /  
alkylcarbonyl <containing 1-7 C> /  
alkenylcarbonyl <containing 2-4 C> / OCHO /  
alkylcarbonyloxy <containing 1-17 C> / 39 / 43



G5 = Ph (substd. by (1-3) G6)

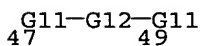
G6 = alkyl <containing 1-4 C> /  
alkoxy <containing 1-4 C>

G7 = Ph (opt. substd. by (1-3) G5)

G8 = H / Me / Ph

G9 = O / NH (opt. substd.)

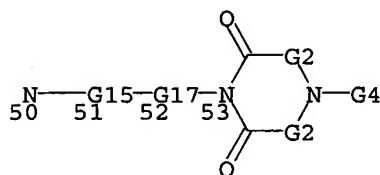
G10 = alkylene <containing 2-10 C> (opt. substd. by OH) /  
47-10 49-12



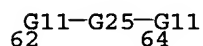
G11 = alkylene <containing 1-10 C> (opt. substd. by OH)



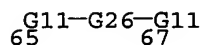
G12 = O / phenylene (opt. substd. by alkyl <containing  
1-4 C>) / NH (opt. substd.)  
G13 = O / 50



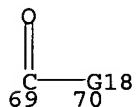
G14 = alkylene <containing 2-10 C> (opt. substd. by OH) /  
62-15 64-13



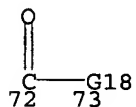
G15 = alkylene <containing 2-10 C> (opt. substd. by OH) /  
65-50 67-52



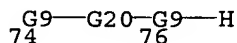
G16 = bond / 70-16 69-14



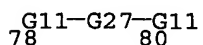
G17 = bond / 72-51 73-53



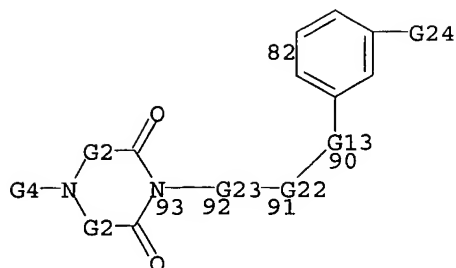
G18 = alkylene <containing 1-4 C>  
G19 = halo / NH2 (opt. substd.) /  
alkoxy <containing 1-4 C> / 74



G20 = alkylene <containing 2-10 C> (opt. substd. by OH) /  
78-74 80-76



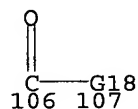
G21 = H / 82



G22 = alkylene <containing 2-10 C> (opt. substd. by OH) /  
102-92 104-90

G11-G28-G11  
102 104

G23 = bond / 107-93 106-91



G24 = halo / NH2 (opt. substd.) /  
alkoxy <containing 1-4 C>

G25 = O / **phenylene** (opt. substd. by alkyl <containing  
1-4 C>) / NH (opt. substd.)

G26 = O / phenylene (opt. substd. by alkyl <containing  
1-4 C>) / NH (opt. substd.)

G27 = O / phenylene (opt. substd. by alkyl <containing  
1-4 C>) / NH (opt. substd.)

G28 = O / phenylene (opt. substd. by alkyl <containing  
1-4 C>) / NH (opt. substd.)

Patent location: claim 1

Note: oxygen alternative in G4 is free radical

L29 ANSWER 24 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 132:3363 MARPAT

TITLE: Heterocyclic compounds and methods to treat cardiac  
failure and other disorders

INVENTOR(S): Mavunkel, Babu J.; Liu, David Y.; Schreiner, George  
F.; Lewicki, John A.; Perumattam, John J.

PATENT ASSIGNEE(S): Scios, Inc., USA

SOURCE: PCT Int. Appl., 71 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9961426	A1	19991202	WO 1999-US11222	19990521
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,				

DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC,  
 LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,  
 RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN,  
 YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,  
 ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG,  
 CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

US 6130235	A	20001010	US 1998-128137	19980803
US 6340685	B1	20020122	US 1999-275176	19990324
AU 9940920	A1	19991213	AU 1999-40920	19990521
AU 769465	B2	20040129		
BR 9911069	A	20010206	BR 1999-11069	19990521
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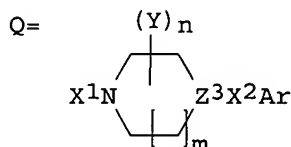
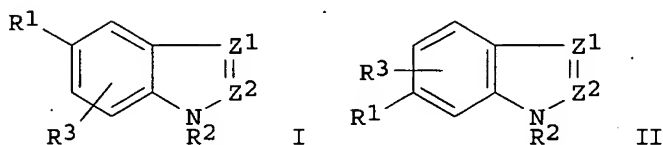
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 IE, FI

JP 2002516314	T2	20020604	JP 2000-550832	19990521
NZ 508790	A	20031031	NZ 1999-508790	19990521
NO 2000005881	A	20010109	NO 2000-5881	20001121

PRIORITY APPLN. INFO.:

US 1998-86531P	19980522
US 1998-128137	19980803
US 1999-275176	19990324
WO 1999-US11222	19990521

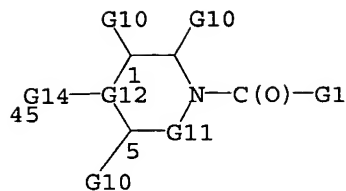
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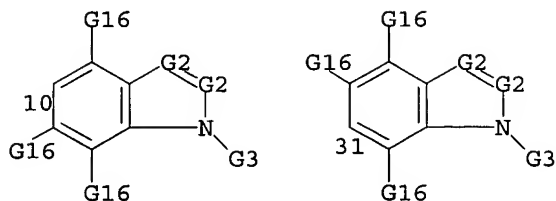
AB Compds. I and II [Z1, Z2 = CR4, N; R4 = H, alkyl, aryl, each of said alkyl or aryl optionally including one or more heteroatoms selected from O, S and N and optionally substituted by one or more of halo, OR, SR, NR2, RCO, CO2R, CONR2, O2CR, NROCR and R = H, alkyl, CN, oxo, etc.; R1 = Q and X1 = CO or an isostere; m = 0, 1; Y = alkyl, aryl, arylalkyl; YY = alkylene bridge; n = 0, 2; Z3 = CH, N; X2 = CH, CH2 or an isostere; Ar = one or two Ph moieties directly coupled to X2 optionally substituted by halo, nitro, alkyl, etc.; R2 = H, alkyl, aryl; R3 = H, halo, NO2, alkyl, alkenyl, etc.], selective inhibitors of p38 $\alpha$  kinase, were prepared E.g., 4-benzylpiperidinyllindole-5-carboxamide was prepared

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

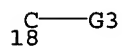
MSTR 1



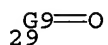
G1 = 10 / 31



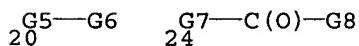
G2 = N / 18



G3 = H / alkyl <containing 1-6 C>  
(opt. substd. by 1 or more G4) /  
aryl (opt. substd. by 1 or more G4) /  
heteroaryl <containing zero or more O, zero or more S,  
zero or more N (no other heteroatoms)>  
(opt. substd. by 1 or more G4) / 29



G4 = halo / OH / SH / NH2 / CHO / CO2H / 20 /  
alkylcarbonyl <containing 1-6 C> /  
alkoxycarbonyl <containing 1-6 C> / CONH2 /  
alkylaminocarbonyl <containing 1-6 C> /  
dialkylaminocarbonyl <each alkyl containing 1-6 C> / OCHO /  
alkylcarbonyloxy <containing 1-6 C> / 24 / CN /  
carbon chain <containing 1 or more C> /  
carbocycle <non-aromatic> / heterocycle <containing 5-6  
atoms, 1-2 heteroatoms> / aryl <containing 6 C> /  
heteroaryl <containing 1-2 heteroatoms>



G5 = O / S / NH / 22



G6 = alkyl <containing 1-6 C>

G7 = NH / 26

$\text{N}_{26} \text{---} \text{G6}$

G8 = H / alkyl <containing 1-6 C>

G9 = carbon chain <containing 1-6 C, saturated>  
(opt. substd.) / carbocycle <aromatic> (opt. substd.) /  
heterocycle <containing zero or more O, zero or more S,  
zero or more N (no other heteroatoms), aromatic>  
(opt. substd.)

G10 = H / alkyl (opt. substd.) / aryl (opt. substd.) /  
aralkyl (opt. substd.)

G11 = bond / 43

$\text{HC}_{43} \text{---} \text{G10}$

G12 = 47-45 48-1 48-5 / 51-45 52-1 52-5

$\text{H}_2\text{C}_{47} \text{---} \text{G13} \quad \text{HC}_{51} = \text{C}_{52}$

G13 = N / 49

$\text{C}_{49} \text{---} \text{G10}$

G14 = Ph (opt. substd. by 1 or more G15)

G15 = halo / NO2 / alkyl <containing 1-6 C> /  
alkenyl <containing 2-6 C> / alkynyl <containing 2-6 C> /  
CN / CF3 / CHO / CO2H / NH2 / OH / SH / 53 / 55 /  
alkylcarbonyloxy <containing 1-6 C> /  
alkylcarbonyl <containing 1-6 C> /  
alkoxycarbonyl <containing 1-6 C> /  
alkylaminocarbonyl <containing 1-6 C> /  
dialkylaminocarbonyl <each alkyl containing 1-6 C> /  
(Specifically claimed: F / Cl)

$\text{G5}_{53} \text{---} \text{G6} \quad \text{G7}_{55} \text{---} \text{C(O)} \text{---} \text{G8}$

G16 = H / halo / NO2 / alkyl <containing 1-6 C> /  
alkenyl <containing 2-6 C> / alkynyl <containing 2-6 C> /  
CN / OH / SH / NH2 / CHO / CO2H /  
alkylcarbonyl <containing 1-6 C> /  
alkoxycarbonyl <containing 1-6 C> / CONH2 /  
alkylaminocarbonyl <containing 1-6 C> /  
dialkylaminocarbonyl <each alkyl containing 1-6 C> / OCHO /  
alkylcarbonyloxy <containing 1-6 C> / 66 /  
(Specifically claimed: OMe / Cl)

$\text{G7}_{66} \text{---} \text{C(O)} \text{---} \text{G8}$

Derivative: and pharmaceutically acceptable salts  
 Patent location: claim 1  
 Note: additional ring formation also claimed

L29 ANSWER 25 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 130:311784 MARPAT

TITLE: Preparation and formulation of phenanthroline derivatives as antifibroproliferative agents

INVENTOR(S): Edwards, Philip Neil; Large, Michael Stewart; Hales, Neil James; Martin, George R.; Huang, Xinfan

PATENT ASSIGNEE(S): Fibrogen, Inc., USA; Zeneca Limited

SOURCE: PCT Int. Appl., 79 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

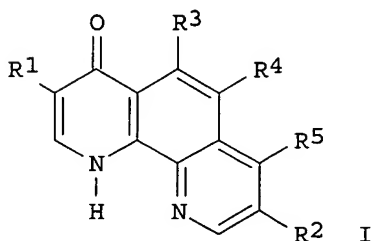
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9921860	A1	19990506	WO 1998-US22704	19981026
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 5916898	A	19990629	US 1997-957450	19971024
CA 2308551	AA	19990506	CA 1998-2308551	19981026
AU 9927027	A1	19990517	AU 1999-27027	19981026
AU 754607	B2	20021121		
EP 1027351	A1	20000816	EP 1998-967153	19981026
EP 1027351	B1	20031203		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2003522093	T2	20030722	JP 2000-517970	19981026
AT 255581	E	20031215	AT 1998-967153	19981026
HK 1030214	A1	20040402	HK 2001-101106	20010215
PRIORITY APPLN. INFO.:				
			US 1997-957450	19971024
			US 1998-177888	19981023
			WO 1998-US22704	19981026

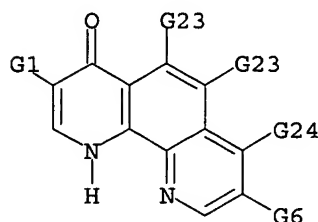
GI



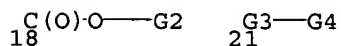
AB The title compds. I [R1 is hydrogen, carboxy, cyano, nitro, alkyl, alkoxy carbonyl, etc.; R2 is, for example, hydrogen, carboxy, alkoxy carbonyl, carbamoyl, etc.; R3 and R4, which may be the same or different, are, for example, hydrogen or halo; and R5 is, for example, hydrogen, dialkylamino or halo] are prepared 8-(N-butyl-N-ethylcarbamoyl)-3-carboxy-4-oxo-3,4-dihydro-1,10-phenanthroline in vitro showed IC50 of 0.4  $\mu$ M against prolyl 4-hydroxylase.

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

## MSTR 1

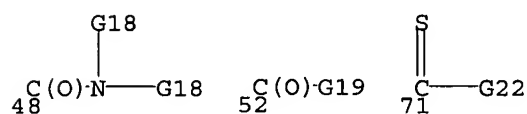
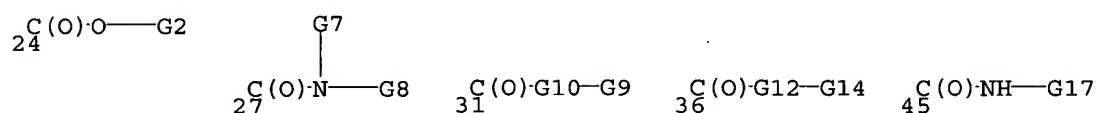


G1 = H / CO2H / 18 / CN / F / Cl / Br / I / NO2 / NH2 /  
 alkyl <containing 1-4 C> / alkylamino <containing 1-4 C> /  
 dialkylamino <each alkyl containing 1-4 C> /  
 alkoxy carbonyl <containing 1-6 C> /  
 alkyl carbonyl <containing 1-4 C> /  
 alkyl <containing 1-4 C> (substd. by OH) / CONH2 /  
 alkylaminocarbonyl <containing 1-4 C> /  
 alkylthio <containing 1-4 C> / alkylsulfinyl <containing 1-4  
 C> / alkylsulfonyl <containing 1-4 C> / 21 /  
 alkoxy carbonyl <containing 1-4 C>  
 (substd. by alkoxy <containing 1-4 C>) /  
 alkoxy carbonyl <containing 1-4 C>  
 (substd. by dialkylaminocarbonyl <each alkyl containing 1-4  
 C>) / alkoxy carbonyl <containing 1-4 C>  
 (substd. by alkoxy <containing 1-4 C>) /  
 alkoxy carbonyl <containing 1-4 C>  
 (substd. by alkylamino <containing 1-4 C>) /  
 alkoxy carbonyl <containing 1-4 C>  
 (substd. by dialkylamino <each alkyl containing 1-4 C>) /  
 alkoxy carbonyl <containing 1-4 C>  
 (substd. by alkoxy <containing 2-4 C>  
 (substd. by alkoxy <containing 1-4 C>)) /  
 alkyl <containing 1-4 C> (substd. by alkylcarbonyloxy  
 <containing 1-4 C>) / alkoxy carbonyl <containing 1-4 C>  
 (substd. by morpholino) / alkylaminocarbonyl <containing 1-8  
 C> (substd. by NH2)

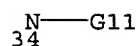


G2 = R <"metabolically labile ester">  
 G3 = S / S(O) / SO2  
 G4 = Ph (opt. substd. by (1-4) G5) /  
 alkyl <containing 1-4 C> (opt. substd. by 1 or more F)

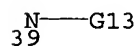
G5 = F / Cl / Br / I / alkoxy <containing 1-4 C> /  
 alkyl <containing 1-4 C> / CN / OH / CF3  
 G6 = H / OH / NH2 / CN / F / Cl / Br / I /  
 alkyl <containing 1-4 C> / CO2H / 24 /  
 alkylamino <containing 1-4 C> /  
 dialkylamino <each alkyl containing 1-4 C> /  
 alkoxy carbonyl <containing 1-6 C> /  
 alkyl carbonyl <containing 1-4 C> /  
 alkoxy <containing 1-4 C> (opt. substd. by CO2H) /  
 alkoxy <containing 1-4 C> (substd. by alkoxy carbonyl  
 <containing 1-4 C>) / CONH2 / alkylaminocarbonyl <containing  
 1-8 C> / dialkylaminocarbonyl <each alkyl containing 1-8 C> /  
 27 / 31 / 36 / 45 / 48 / 52 / 71 /  
 alkyl carbonylamino <containing 1-4 C> /  
 alkoxy carbonylamino <containing 1-4 C>



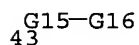
G7 = alkyl <containing 1-8 C>  
 G8 = NH2 / alkylamino <containing 1-4 C> /  
 alkyl <containing 1-4 C>  
 G9 = cyclohexyl / cyclopentyl  
 G10 = NH / 34



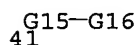
G11 = alkyl <containing 1-4 C>  
 G12 = NH / 39



G13 = alkyl <containing 1-4 C> /  
 Ph (opt. substd. by (1-4) G5) / 43

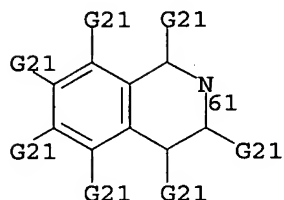


G14 = Ph (opt. substd. by (1-4) G15) / 41





G15 = alkylene <containing 1-4 C>  
 G16 = Ph (opt. substd. by (1-4) G5)  
 G17 = alkylcarbonyl <containing 1-4 C> /  
       alkoxycarbonyl <containing 1-4 C> /  
       alkyl <containing 1-6 C> (substd. by 1 or more F)  
 G18 = alkyl <containing 1-6 C>  
       (opt. substd. by 1 or more F)  
 G19 = pyrrolidino (opt. substd. by (1-4) G20) /  
       piperidino (opt. substd. by (1-4) G20) /  
       **piperazino (opt. substd. by (1-4) G20) /**  
       morpholino (opt. substd. by (1-4) G20) / 61



G20 = alkyl <containing 1-4 C> / **CH2Ph**  
 G21 = H / alkyl <containing 1-4 C> / CH2Ph  
 G22 = dialkylamino <each alkyl containing 1-4 C>  
 G23 = H / alkyl <containing 1-4 C> /  
       alkoxy <containing 1-4 C> / F / Cl / Br / I / NO2 / OH /  
       alkyl <containing 1-4 C> (substd. by 1 or more F) / pyridyl /  
       OMe  
 G24 = H / OH / NH2 / alkylamino <containing 1-4 C> /  
       dialkylamino <each alkyl containing 1-4 C> / F / Cl / Br /  
       I / alkoxy <containing 1-4 C> (substd. by alkoxy <containing  
       1-4 C>) / alkoxy <containing 1-6 C>  
       (substd. by 1 or more F) / pyrrolidino (opt. substd. by (1-4)  
       G25) / piperidino (opt. substd. by (1-4) G25) /  
       piperazino (opt. substd. by (1-4) G25) /  
       morpholino (opt. substd. by (1-4) G25)  
 G25 = alkyl <containing 1-4 C> / CH2Ph  
 Derivative: or pharmaceutically acceptable salts  
 Patent location: claim 1

L29 ANSWER 26 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 130:168370 MARPAT

TITLE: Preparation of hydantoin derivatives as farnesyl  
transferase inhibitors

INVENTOR(S): Lee, Jin Ho; Koh, Jong Sung; Kim, Jong Hyun; Lee, Hyun  
Il; Jung, Won Hee; Ro, Seong Gu; Shin, You Seung; Kim,  
Sang Woong; Park, Ki Won; Kwak, Tae Hwan; Moon, Kyung  
Duk; Chung, Hyun Ho

PATENT ASSIGNEE(S): LG Chemical Ltd., S. Korea

SOURCE: PCT Int. Appl., 129 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9905117            A1    19990204            WO 1998-KR225        19980724  
       W: AU, BR, CN, JP, MX, RU, US  
       RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,  
           PT, SE  
 ZA 9806623            A    19990126            ZA 1998-6623        19980724  
 AU 9884647            A1   19990216            AU 1998-84647       19980724  
 AU 729341            B2   20010201  
 EP 1000036            A1   20000517            EP 1998-935376      19980724  
       R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
           IE, FI  
 JP 2001510829        T2   20010807            JP 2000-504116      19980724  
 US 6384061            B1   20020507            US 2000-463551      20000330  
 PRIORITY APPLN. INFO.:            KR 1997-35333        19970726  
    WO 1998-KR225        19980724

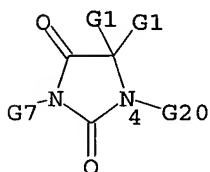
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

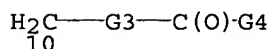
AB The title compds. [I; R1, R2 = H, lower alkyl, (un)substituted monocyclic or bicyclic aryl; heterocyclyl containing N or S as ring members, etc.; R3 = amino acid residue, II-V (wherein A = H, lower alkyl, (un)substituted aryl, etc.; B, C = H, halo, lower alkyl; n = 0-4); R4 = H, (un)substituted aryl, bicyclic aryl, etc.], which showed an inhibitory activity against farnesyl transferase, and thus can be used as an anti-cancer agents, were prepared E.g., a 4-step synthesis of compound VI which showed IC50 of 500 nM against Ftase and IC50 of > 10 µM against GGTase, was given.

REFERENCE COUNT:            2            THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS  
    RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

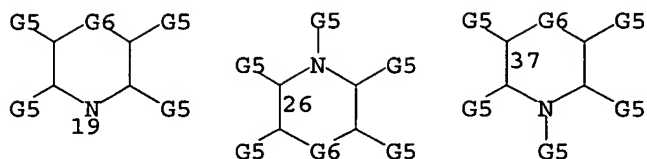
# MSTR 1



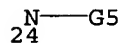
G1 = H / alkyl <containing 1-4 C> /  
       aryl <mono- or bicyclic> (opt. substd. by 1 or more G2) /  
       heterocycle <containing 1-2 heteroatoms, zero or more N,  
       zero or more S (no other heteroatoms), mono- or bicyclic> /  
       10



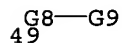
G2 = alkyl <containing 1-4 C> / halo  
 G3 = (0-2) CH2  
 G4 = alkoxy / OH / R <"amino acid"> / 19 / 26 / 37 /  
       alkylamino (substd. by alkoxy) /  
       alkylamino (substd. by aryloxy (opt. substd. by alkyl  
       <containing 1-4 C>))



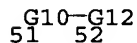
G5 = H / alkyl <containing 1-4 C>  
 G6 = O / S / 24



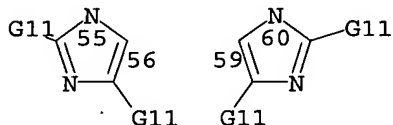
G7 = H / R <"amino acid"> / 49



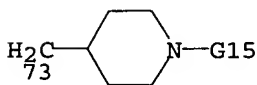
G8 = (1-5) CH<sub>2</sub>  
 G9 = 51 / 3-pyridyl / 4-pyridyl



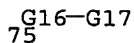
G10 = 56-49 55-52 / 60-49 59-52



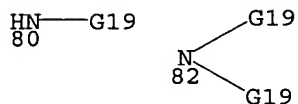
G11 = H / halo / alkyl <containing 1-4 C>  
 G12 = H / alkyl <containing 1-4 C> (opt. substd. by G42) /  
 aryl (opt. substd. by 1 or more G13) /  
 heterocycle <containing 1-2 heteroatoms, zero or more N,  
 zero or more S (no other heteroatoms), mono- or bicyclic>  
 (opt. substd. by 1 or more G14) / 73



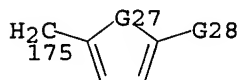
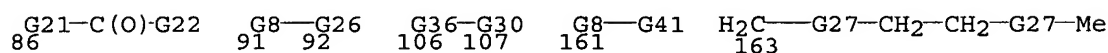
G13 = halo / CN / NO<sub>2</sub> / CO<sub>2</sub>H / CONH<sub>2</sub> / CSNH<sub>2</sub> / SH /  
 alkylthio <containing 1-4 C> / alkyl <containing 1-4 C>  
 G14 = halo / CN / NO<sub>2</sub> / CO<sub>2</sub>H /  
 alkoxy carbonyl <containing 1-4 C> / CONH<sub>2</sub> / CSNH<sub>2</sub> / SH /  
 alkylthio <containing 1-4 C> / alkyl <containing 1-4 C>  
 G15 = H / 75



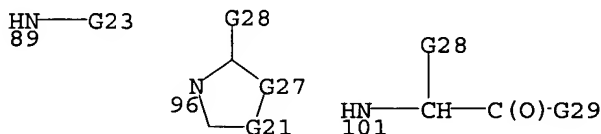
G16 = CH<sub>2</sub> / C(O) / SO<sub>2</sub>  
 G17 = H / alkyl <containing 1-4 C> (opt. substd. by G18) /  
 alkoxy <containing 1-4 C> / Ph / CH<sub>2</sub>Ph / OCH<sub>2</sub>Ph / NH<sub>2</sub> / 80 /  
 82



G18 = Ph / biphenyl  
 G19 = alkyl <containing 1-4 C> / Ph / CH<sub>2</sub>Ph / cycloalkyl /  
 alkyl (substd. by OPh)  
 G20 = H / aryl <monocyclic> (opt. substd. by 1 or more G2)  
 / aryl <bicyclic> / heteroaryl <containing 1 or more  
 heteroatoms, zero or more N, zero or more S (no other  
 heteroatoms)> / 86 / 91 / 106 / 161 / 163 / 175



G21 = (0-4) CH<sub>2</sub>  
 G22 = aryl (substd. by alkoxy <containing 1-4 C>) /  
 heterocycle <containing 1 or more heteroatoms,  
 zero or more N, zero or more O,  
 zero or more S (no other heteroatoms)> / NH<sub>2</sub> / 89 / 96 /  
 101 / OH / alkoxy <containing 1-4 C> (opt. substd. by aryl)

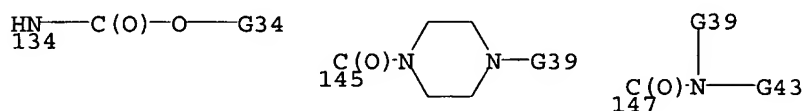


G23 = alkyl <containing 1-4 C>  
 (opt. substd. by 1 or more G24) /  
 heterocycle <containing 1-2 heteroatoms, zero or more N,  
 zero or more S (no other heteroatoms), mono- or bicyclic>  
 (opt. substd. by 1 or more G25)  
 G24 = halo / CN / OH / alkoxycarbonyl <containing 1-4 C> /  
 CONH<sub>2</sub> / CSNH<sub>2</sub> / alkylthio <containing 1-4 C> /  
 alkylsulfonyl <containing 1-4 C> /  
 aryl (opt. substd. by 1 or more G25)  
 G25 = halo / CN / alkoxycarbonyl <containing 1-4 C> /  
 CONH<sub>2</sub> / CSNH<sub>2</sub> / alkylthio <containing 1-4 C> /  
 alkylsulfonyl <containing 1-4 C> / alkyl <containing 1-4 C>  
 G26 = NH<sub>2</sub> / 93 / H / heterocycle <containing 1-2  
 heteroatoms, zero or more N, zero or more S (no other  
 heteroatoms), mono- or bicyclic>  
 (opt. substd. by 1 or more G25)

HN—G23  
93

G27 = CH2 / C(O) / O / S / SO2  
 G28 = H / alkyl <containing 1-4 C>  
 (opt. substd. by 1 or more G24) /  
 heterocycle <containing 1-2 heteroatoms, zero or more N,  
 zero or more S (no other heteroatoms), mono- or bicyclic>  
 (opt. substd. by 1 or more G25)  
 G29 = OH / alkoxy <containing 1-4 C>  
 (opt. substd. by aryl)  
 G30 = Ph (opt. substd. by (1-2) G31)  
 G31 = halo / alkyl (substd. by 1 or more halo) / CN /  
 CONH2 / CSNH2 / alkoxy / OPh / 128 / 126 / 132 / 134 / 108 /  
 123 / 145 / 147

G35—G32—G34    G21—C(O)—G34    G38—G34    G8—G34    HN—SO2—G34  
108    110    123    126    128    132



G32 = O / S / SO2 / NH / 111 / 113-108 114-110 /  
 115-108 117-110

N—G33    HN—SO2    HN—C(O)—O  
111    113 114    115    117

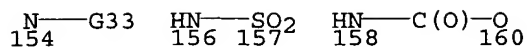
G33 = alkyl <containing 1-4 C> (opt. substd. by aryl)  
 G34 = H / alkyl <containing 1-4 C> /  
 alkyl (substd. by 1 or more halo) / alkoxy / OH / CO2CH2Ph /  
 CH2Ph  
 G35 = (1-4) CH2  
 G36 = 118-4 120-107 / 121-4 122-107 / G8

G21—C(O)—NH    G8—NH  
118    120    121 122

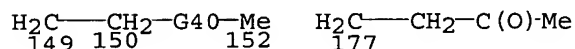
G38 = O / S / SO2 / NH / 130

N—G33  
130

G39 = H / alkyl <containing 1-4 C> /  
 alkyl (substd. by 1 or more halo) / alkoxy / OH / CO2CH2Ph /  
 CH2Ph  
 G40 = O / S / SO2 / NH / 154 / 156-150 157-152 /  
 158-150 160-152



- G41 = alkyl <containing 1-4 C>  
(opt. substd. by 1 or more G24)
- G42 = aryl (opt. substd. by 1 or more G13) /  
heterocycle <containing 1-2 heteroatoms, zero or more N,  
zero or more S (no other heteroatoms), mono- or bicyclic>  
(opt. substd. by 1 or more G14)
- G43 = 149 / Bu-n / 177

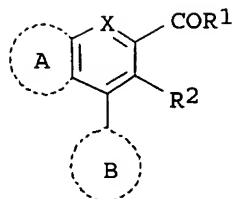


Derivative: or pharmaceutically acceptable salts  
Patent location: claim 1  
Note: also incorporates claim 4

L29 ANSWER 27 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 129:343485 MARPAT  
TITLE: Preparation of cell differentiation inducing amide  
derivatives and their uses  
INVENTOR(S): Marui, Shogo; Hazama, Masatoshi; Notoya, Kohei; Kato,  
Koki  
PATENT ASSIGNEE(S): Takeda Chemical Industries, Ltd., Japan  
SOURCE: PCT Int. Appl., 146 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9849155	A1	19981105	WO 1998-JP1871	19980423
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GW, HU, ID, IL, IS, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, US, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2285402	AA	19981105	CA 1998-2285402	19980423
AU 9870801	A1	19981124	AU 1998-70801	19980423
JP 11005772	A2	19990112	JP 1998-113116	19980423
EP 975621	A1	20000202	EP 1998-917647	19980423
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 6340704	B1	20020122	US 1999-341803	19990719
PRIORITY APPLN. INFO.:			JP 1997-109915	19970425
			WO 1998-JP1871	19980423

GI

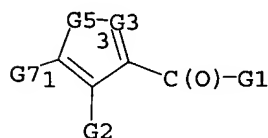


I

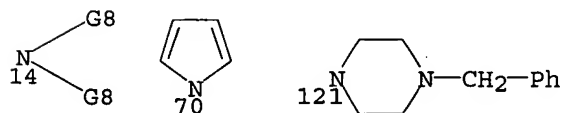
AB Title arylamides [I; wherein R1 is an amino group which may be substituted; R2 is a hydrogen atom or a lower alkyl group which may be substituted; X is a methyne group which may be substituted or N(O)m (m is 0 or 1); a ring A is a homo- or hetero-cycle which is substituted by a halogen atom, lower alkyl, lower alkoxy or lower alkylendioxy; and a ring B is a homo- or hetero-cycle which may be substituted], or a salt thereof, are prepared and exhibits excellent cell differentiation-inducing action and cell differentiation-inducing factor action-enhancing action, and is useful in the treatment and prevention of various nerve diseases or bone/joint diseases.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

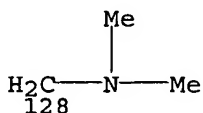
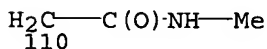
## MSTR 1



G1 = 14 / OH / (Specifically claimed: heterocycle <containing 1 or more heteroatoms, 1 or more N, attached through 1 or more N> (opt. substd.) / heterocycle <containing 5-8 atoms, 1 or more heteroatoms, 1 or more N, attached through 1 or more N, 5- to 8-membered monocyclic ring> (opt. substd. by G18)) / (Examples: aziridino / azetidino / pyrrolidino / piperidino / morpholino / piperazino / 70 / 121)



G2 = H / loweralkyl (opt. substd.) / (Specifically claimed: alkyl <containing 1-6 C> (opt. substd. by 1 or more G11) / CH2OH) / (Examples: Me / CH2CH2OH / 110 / 128)

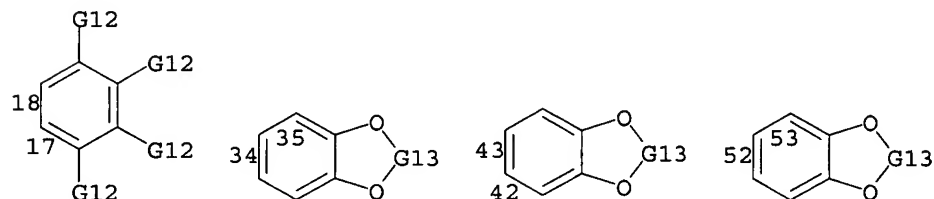


G3 = 9 / N / 11



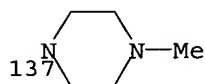
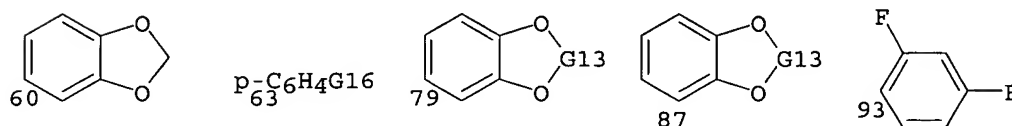
G4 = H / R / (Specifically claimed: alkyl &lt;containing 1-6 C&gt;) / (Example: Me)

G5 = carbocycle <attached through 2 or more C> (opt. substd. by 1 or more G6) / heterocycle <containing 2 or more C, attached through 2 or more C> (opt. substd. by 1 or more G6) / (Specifically claimed: 18-3 17-1 / 35-3 34-1 / 43-3 42-1 / 52-3 53-1 )



G6 = F / Cl / Br / I / loweralkyl / loweralkoxy

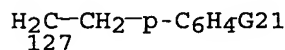
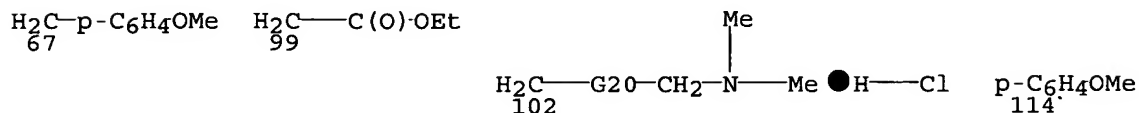
G7 = carbocycle (opt. substd.) / heterocycle (opt. substd.) / (Specifically claimed: Ph (opt. substd. by 1 or more G19) / aryl <containing 6-12 C> (opt. substd. by 1 or more G14) / heterocycle <containing 2 heteroatoms, 2 O, 7-15 C, aromatic, 6 or more normalized bonds, polycyclic, 1 or more 6-membered rings> (opt. substd. by 1 or more G14) / heterocycle <containing 5-8 atoms, 1-3 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms), 5- to 8-membered monocyclic ring> (opt. substd. by alkyl <containing 1-6 C>) / 60 / 63) / (Examples: 79 / 87 / 2-naphthyl / 93 / 4-pyridyl / piperidino / pyrrolidino / morpholino / 137)



G8 = H / R / (Specifically claimed: OH (opt. substd.) / loweralkyl (opt. substd.) / acyl / aryl (opt. substd.) / aralkyl (opt. substd. by 1 or more G10) / alkyl <containing 1-6 C> (opt. substd. by 1 or more G9) / aryl <containing 6-14 C> (opt. substd. by alkoxy <containing 1-6 C>) / Me / 67) / (Examples: Ph (opt. substd. by alkoxy



<containing 1-6 C> / CH<sub>2</sub>Ph (opt. substd. by G17) / 99 /  
CH<sub>2</sub>CO<sub>2</sub>H / 102 / Pr-n / 114 / 127 / CH<sub>2</sub>CH<sub>2</sub>OH)



- G9 = OH / CO<sub>2</sub>H / alkoxycarbonyl <containing 1-6 C> /  
NH<sub>2</sub> / alkylamino <containing 1-6 C> /  
dialkylamino <each alkyl containing 1-6 C>
- G10 = R / alkoxy <containing 1-6 C> / acylamino
- G11 = OH / CONH<sub>2</sub> / alkylaminocarbonyl <containing 1-6 C> /  
dialkylaminocarbonyl <each alkyl containing 1-6 C> / NH<sub>2</sub> /  
alkylamino <containing 1-6 C> /  
dialkylamino <each alkyl containing 1-6 C>
- G12 = H / F / Cl / Br / I / loweralkyl / loweralkoxy /  
OEt / (Examples: Me / OMe)
- G13 = loweralkylene / CH<sub>2</sub>
- G14 = F / Cl / Br / I / alkyl <containing 1-6 C>  
(opt. substd. by 1 or more G15) /  
alkoxy <containing 1-6 C> (opt. substd. by 1 or more G15)
- G15 = F / Cl / Br / I
- G16 = OMe / F / (Examples: Cl / Me / CF<sub>3</sub> / OCF<sub>3</sub>)
- G17 = alkoxy <containing 1-6 C> / acylamino
- G18 = aralkyl / (Example: CH<sub>2</sub>Ph)
- G19 = R / (Examples: F / Cl / Br / I /  
alkyl <containing 1-6 C> (opt. substd. by 1 or more G15) /  
alkoxy <containing 1-6 C> (opt. substd. by 1 or more G15))
- G20 = (0-1) CH<sub>2</sub>
- G21 = OMe / NHCOMe
- Derivative: or salts
- Patent location: claim 1
- Note: also incorporates claim 27

L29 ANSWER 28 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 128:154388 MARPAT

TITLE: Preparation of peptide analogs with growth hormone  
releasing properties

INVENTOR(S): Peschke, Bernd; Ankersen, Michael; Hansen, Thomas  
Kruse; Thogersen, Henning

PATENT ASSIGNEE(S): Novo Nordisk A/S, Den.; Peschke, Bernd; Ankersen,  
Michael; Hansen, Thomas Kruse; Thogersen, Henning

SOURCE: PCT Int. Appl., 178 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

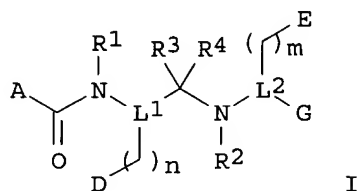
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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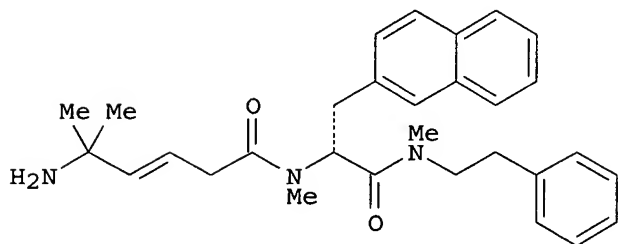
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LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,  
PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US,  
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RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,  
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GN, ML, MR, NE, SN, TD, TG  
AU 9734346      A1      19980210      AU 1997-34346      19970717  
EP 923539      A1      19990623      EP 1997-930368      19970717  
EP 923539      B1      20020605  
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US 5922770      A      19990713      US 1997-896550      19970717  
JP 2000515517      T2      20001121      JP 1998-506465      19970717  
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EP 1184370      A3      20020327  
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ZA 9706371      A      19980122      ZA 1997-6371      19970718  
US 6127354      A      20001003      US 1999-270862      19990317  
US 6274584      B1      20010814      US 2000-619227      20000719  
DK 1996-803      19960722  
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US 1999-270862      19990317

PRIORITY APPLN. INFO.:

GI



I



II

AB The present invention relates to novel peptide analogs of general formula I [A = X-A1; X = alkylene chain optionally substituted and/or optionally containing O, S, or C:C double bond; A1 = N-containing heterocycle, (aminoalkyl)phenyl, (aminoalkyl)thienyl; G = H, halo, C1-6 alkyl, aryl,

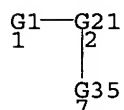
C1-6 alkoxy, CONR39R40, (CH<sub>2</sub>)pNR39SO2R41, (CH<sub>2</sub>)pNR39COR40, (CH<sub>2</sub>)pOR41, (CH<sub>2</sub>)pO2CR40, CHR39R40, CONR39NR40R42, (CH<sub>2</sub>)pNR39CSNR40R42, (CH<sub>2</sub>)pNR39CONR40R42; R39, R40 = independently H, (un)substituted C1-6 alkyl, etc.; R41 = aryl-substituted C1-6 alkyl; R42 = C1-6 alkyl; L1, L2 = independently CR57, N; R57 = H, C1-6 alkyl (un)substituted with OH, halo, C1-6 alkoxy, aryl; D, E = independently H, alkoxy, aryl, heteroaryl; R1 = H, C1-6 alkyl; R2 = H, acyl, C1-6 alkyl; R1R2 may form alkylene bridge; R3, R4 = independently H, (un)substituted C1-6 alkyl; R3R4 = O, S; n, m, p = independently 0-3] pharmaceutical compns. containing them, a method of stimulating the release of growth hormone from the pituitary, a method for increasing the rate and extent of growth of animals to increase their milk and wool production, or for the treatment of ailments, and to use of the compds. for the preparation of medicaments. Thus, peptidomimetic II was

prepared

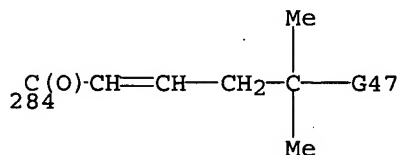
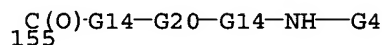
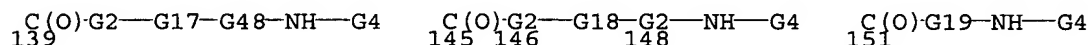
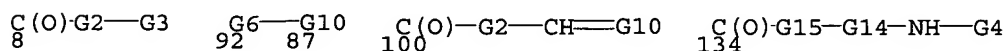
by standard reactions from (R)-2-[N-tert-butoxycarbonyl-N-methylamino]-3-(2-naphthyl)propionic acid, N-methyl-N-phenethylamine, and (E)-5-(tert-butoxycarbonylamino)-5-methylhex-2-enoic acid. II and related peptide analogs were tested for growth hormone release in rat pituitary primary cultures in doses ranging from 10 pM to 100 mM. The prepared compds. were also tested for metabolic stability.

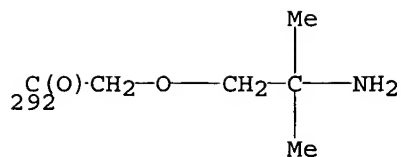
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

#### MSTR 1

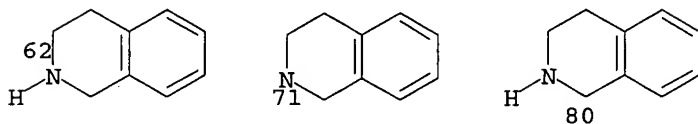
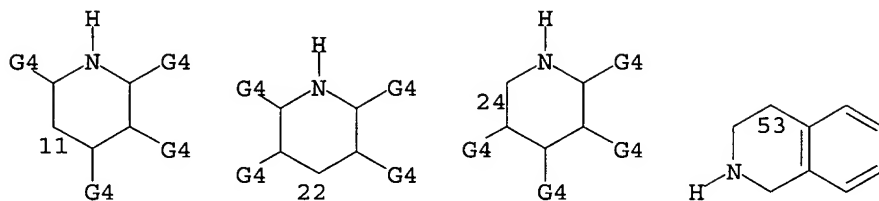
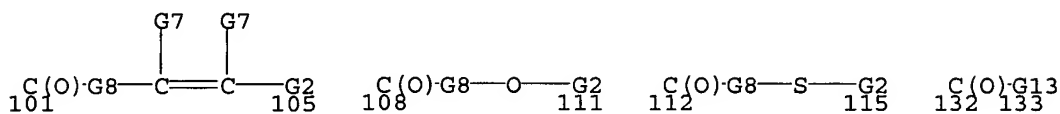


G1 = 8 / 92 / 100 / 134 / 139 / 145 / 151 / 155 /  
(Examples: 284 / 292)



G2 = (0-3) CH<sub>2</sub>

G3 = 11 / 22 / 24 / 53 / 62 / 71 / 80

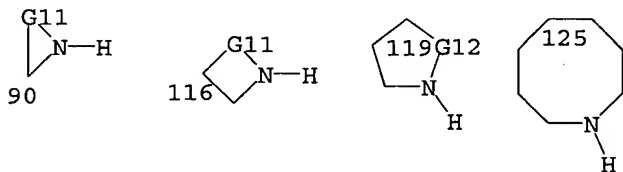
G4 = H / alkyl <containing 1-6 C>  
(opt. substd. by 1 or more G5)G5 = F / Cl / Br / I / NH<sub>2</sub> / OH / aryl (opt. substd.) /  
heteroaryl (opt. substd.)G6 = 101-2 105-87 / 108-2 111-87 / 112-2 115-87 /  
132-2 133-87

G7 = H / alkyl &lt;containing 1-6 C&gt; (opt. substd. by G9)

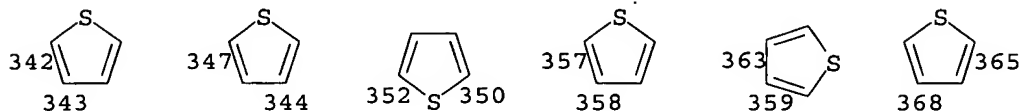
G8 = (0-1) CH<sub>2</sub>

G9 = aryl (opt. substd.) / heteroaryl (opt. substd.)

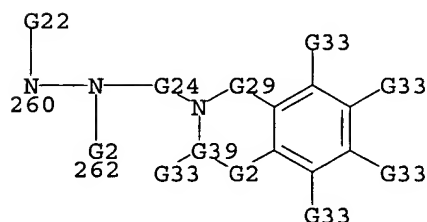
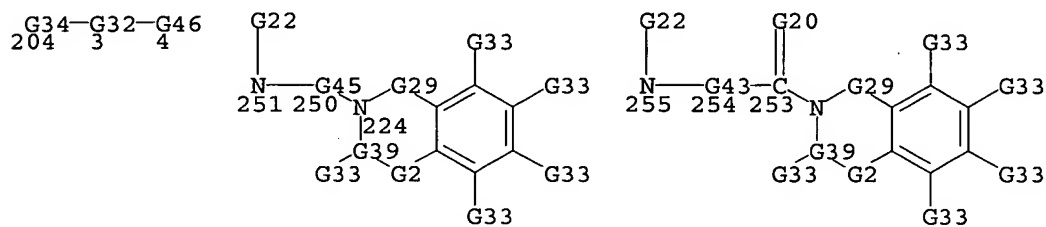
G10 = 90 / 116 / 119 / 125

G11 = (1-3) CH<sub>2</sub>G12 = (2-3) CH<sub>2</sub>G13 = (0-4) CH<sub>2</sub>G14 = bond / alkylene <containing 1 or more C>  
(opt. substd. by 1 or more G5)

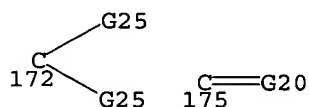
- G15 = cycloalkylene <containing 3-8 C,  
attached through 2 or more C> (opt. substd. by G16)  
G16 = alkyl <containing 1-6 C>  
(opt. substd. by 1 or more G5)  
G17 = **phenylene**  
G18 = 342-146 343-148 / 347-146 344-148 /  
352-146 350-148 / 358-146 357-148 / 363-146 359-148 /  
368-146 365-148



- G19 = alkenylene <containing 2 or more C, 1 double bond>  
(opt. substd. by 1 or more G5) / bond /  
alkylene <containing 1 or more C>  
(opt. substd. by 1 or more G5)  
G20 = O / S  
G21 = 204 / 260-1 262-7 / 251-1 250-7 / 255-1 254-7

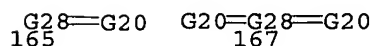


- G22 = H / alkyl <containing 1-6 C> / (Example: Me)  
G23 = H / CHO / alkylcarbonyl <containing 1-6 C> /  
alkyl <containing 1-6 C> / (Examples: Me / COMe)  
G24 = 172 / 175

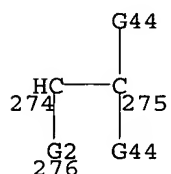


- G25 = H / alkyl <containing 1-6 C>  
(opt. substd. by 1 or more G26)  
G26 = OH / alkoxy <containing 1-6 C> / F / Cl / Br / I /  
aryl (opt. substd.) / heteroaryl (opt. substd.)  
G27 = heterocycle <containing 2-3 heteroatoms,

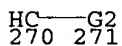
2-3 N (no other heteroatoms), attached through 2 or more N,  
non-aromatic, saturated, 5- to 7-membered monocyclic ring>  
(opt. substd.) / 165 / 167



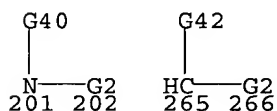
- G28 = heterocycle <containing 2-3 heteroatoms,  
2-3 N (no other heteroatoms), attached through 2 or more N,  
non-aromatic, saturated, 5- to 7-membered monocyclic ring>  
(opt. substd.)
- G29 = (1-2) CH2
- G30 = carbon chain <containing 2 or more C, saturated>  
(opt. substd. by 1 or more G26) /  
(Specifically claimed: 274-177 275-179 276-7 )



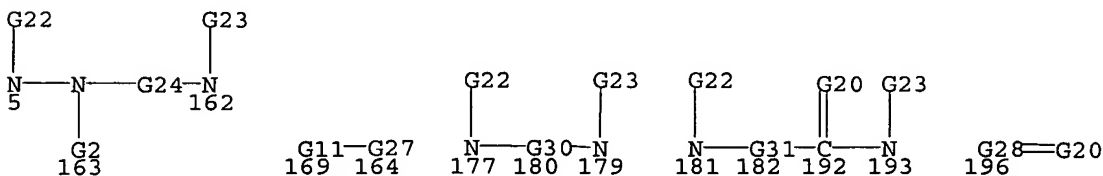
- G31 = carbon chain <containing 1 or more C, saturated>  
(opt. substd. by 1 or more G26) /  
(Specifically claimed: 270-181 271-7 270-192 )

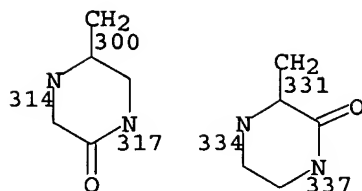
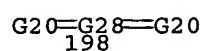


- G32 = 201-204 202-4 / alkylene <containing 1 or more C>  
(opt. substd.) / (Specifically claimed: 265-204 266-4 )

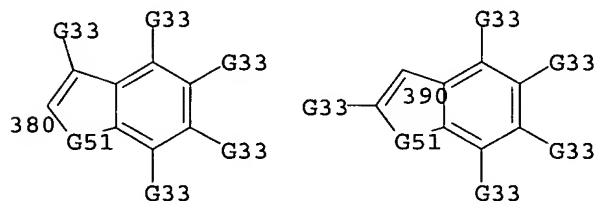
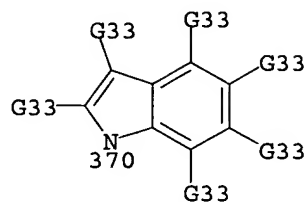
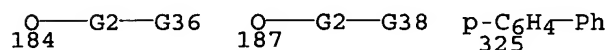


- G33 = H / R
- G34 = 5-1 162-3 163-7 / 177-1 179-3 180-7 /  
181-1 193-3 182-7 / heterocycle <containing 2-3  
heteroatoms, 2-3 N (no other heteroatoms),  
attached through 2 or more N, non-aromatic, saturated,  
5- to 7-membered monocyclic ring> (opt. substd.) / 196 /  
198 / 164-1 169-7 164-3 / (Examples: 314-1 317-3 300-7 /  
334-1 337-3 331-7 )

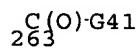




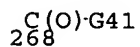
G35 = H / 184 / 187 / Ph (opt. substd.) /  
pyridyl (opt. substd.) / naphthyl (opt. substd.) / 370 /  
380 / 390 / imidazolyl (opt. substd.) /  
thienyl (opt. substd.) / (Example: 325)



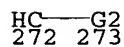
G36 = H / aryl (opt. substd. by 1 or more G50) /  
heteroaryl (opt. substd. by 1 or more G50)  
G37 = F / Cl / Br / I  
G38 = alkyl <containing 1 or more C>  
(opt. substd. by 1 or more G37)  
G39 = CH (opt. substd.) / N  
G40 = H / R / (Specifically claimed: 263)



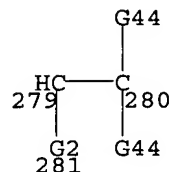
G41 = NH<sub>2</sub> / alkylamino <containing 1-6 C> /  
dialkylamino <each alkyl containing 1-6 C> /  
(Examples: NH<sub>2</sub>Et / NHMe)  
G42 = H / 268



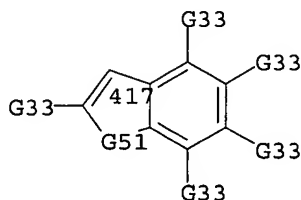
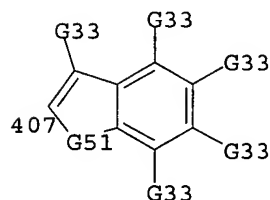
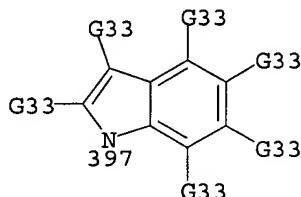
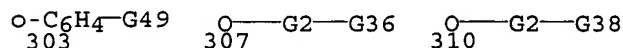
G43 = carbon chain <containing 1 or more C, saturated>  
(opt. substd. by 1 or more G26) /  
(Specifically claimed: 272-255 273-7 272-253 )



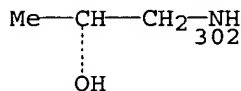
- G44 = H / alkyl <containing 1-6 C>  
 G45 = carbon chain <containing 2 or more C, saturated>  
 (opt. substd. by 1 or more G26) /  
 (Specifically claimed: 279-251 280-224 281-7 )



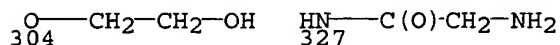
- G46 = H / 307 / 310 / **Ph** (opt. substd.) /  
 pyridyl (opt. substd.) / naphthyl (opt. substd.) / 397 /  
 407 / 417 / imidazolyl (opt. substd.) /  
 thienyl (opt. substd.) / (Example: 303)



- G47 = NH<sub>2</sub> / 302 / NHMe



- G48 = bond / **alkylene** <containing 1 or more C>  
 (opt. substd. by 1 or more G5) / (Examples: CHMe / CH<sub>2</sub>)  
 G49 = NHSO<sub>2</sub>Me / 304 / NHSO<sub>2</sub>Ph / 327



- G50 = F / Cl / Br / I / alkyl <containing 1-6 C>  
 G51 = NH (opt. substd.) / S  
 Derivative: or pharmaceutically acceptable salts



Patent location: claim 1  
 Note: additional ring formation also claimed  
 Note: substitution is restricted

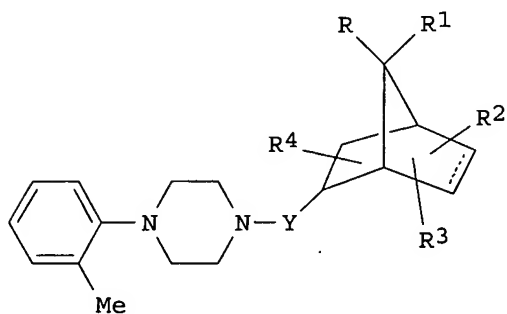
L29 ANSWER 29 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 128:23030 MARPAT  
 TITLE: Preparation of camphorcarbonyl derivatives  
 INVENTOR(S): Bock, Mark G.; Hobbs, Doug W.  
 PATENT ASSIGNEE(S): Merck and Co., Inc., USA  
 SOURCE: U.S., 65 pp., Cont.-in-part of U.S. Ser. No. 93,502,  
 abandoned.  
 CODEN: USXXAM

DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

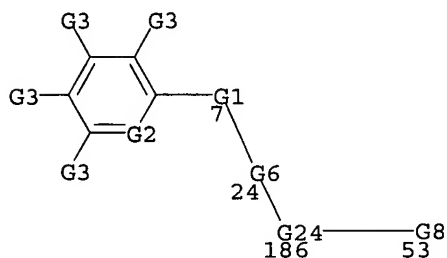
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5686454	A	19971111	US 1996-578640	19960116
WO 9502587	A1	19950126	WO 1994-US7769	19940711
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, FI, GE, HU, JP, KE, KG, KR, KZ, LK, LT, LV, MD, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SI, SK, TJ, TT, UA, US, UZ				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			US 1993-93502	19930716
			WO 1994-US7769	19940711

GI



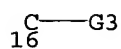
AB The camphorcarbonyl derivs. I (Y = carbonyl or sulfonyl; R, R1 = alkyl, or RR1 form a C3-C6 carbocyclic ring; R2 and R3 are each independently selected from H, OH, oximido, Me, carboxy, carboxyalkyl, unsubstituted or substituted alkoxy carbonyl, alkylcarbonyloxyalkyl, cyanoalkyl, hydroxyalkyl or unsubstituted amino; R4 is H, oxo, -N(R5)-CO-R6 or -CO-N(R7)-R8; R5 = H or unsubstituted or substituted alkyl; R6 = alkoxy, unsubstituted or substituted heterocyclic rings; and R7 and R8 = H or unsubstituted or substituted alkyl; the Y moiety cannot be bonded to the camphor ring at the 3 or 6 positions) were prepared as oxytocin antagonists useful in the treatment of preterm labor, dysmenorrhea and for the stoppage of labor preparatory to cesarean delivery. Thus, (-)-camphor- $\alpha$ -carboxylic acid was treated with 1-(o-tolyl)piperazine-HCl to give a mixture of exo- and endo-1-(2-methylphenyl)-4-[(4,7,7-

trimethyl-3-oxobicyclo[2.2.1]hept-2-yl)carbonylpiperazine, the endo isomer was alkylated with Et iodoacetate to give endo-1-(2-methylphenyl)-4-[(4,7,7-trimethyl-3-oxo-2-(carboxymethyl)bicyclo[2.2.1]hept-2-yl)carbonylpiperazine. IC50 values were determined for binding assays with oxytocin.

**MSTR 2**

G1 = bond / CH2

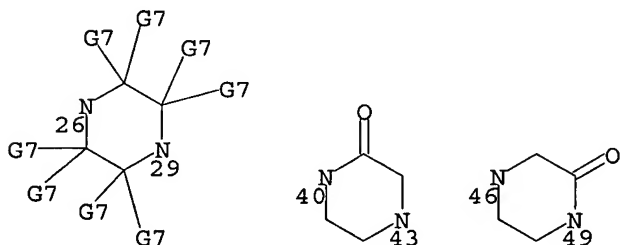
G2 = N / 16



G3 = H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more G4) / F / Cl / Br / I /  
alkoxy <containing 1-10 C>

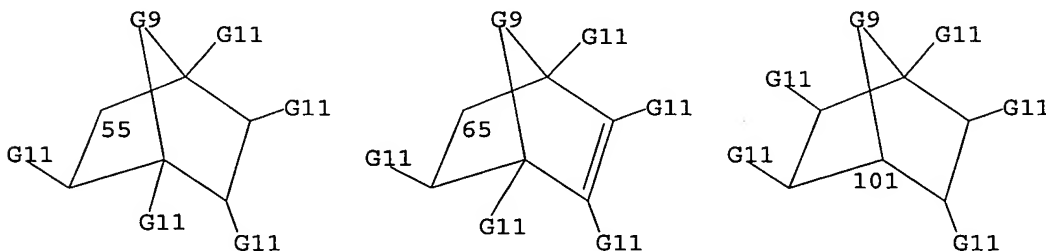
G4 = F / Cl / Br / I

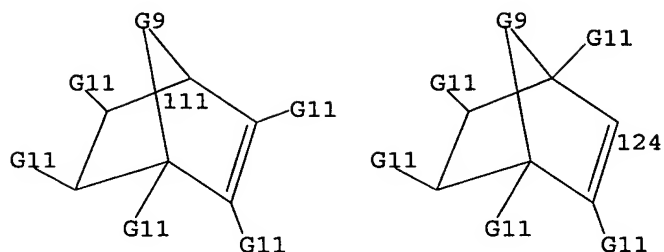
G6 = 26-7 29-186 / 40-7 43-186 / 46-7 49-186



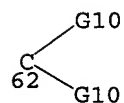
G7 = 6 or more H / alkyl <containing 1-10 C>  
(opt. substd. by Ph)

G8 = 55 / 101 / 65 / 111 / 124



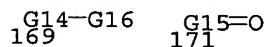
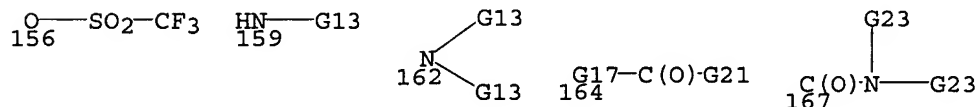


G9 = O / 62 / carbocycle <containing 3-6 C, attached through 1 C>

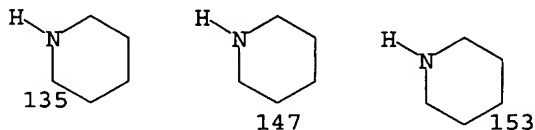


G10 = H / alkyl <containing 1-10 C>

G11 = H / OH / F / Cl / Br / I / Me / CO<sub>2</sub>H /  
alkyl <containing 1-10 C> (substd. by CO<sub>2</sub>H) /  
alkoxycarbonyl (opt. substd. by G12) /  
alkylcarbonyloxy <containing 1-10 C> /  
alkyl <containing 1-10 C> (substd. by alkoxycarbonyl  
<containing 1-10 C>) / alkoxy <containing 1-10 C>  
(substd. by alkoxycarbonyl <containing 1-10 C>) /  
alkyl <containing 1-10 C> (substd. by CN) /  
alkyl <containing 1-10 C> (substd. by OH) / 156 / NH<sub>2</sub> / 159 /  
162 / 164 / 167 / 169 / 171

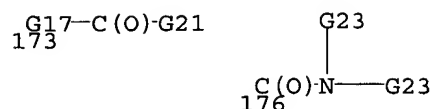


G12 = pyridyl / piperidino / 135 / 147 / 153

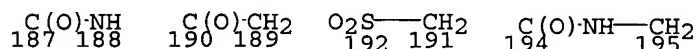


G13 = alkyl <containing 1-10 C> (opt. substd. by CO<sub>2</sub>H) /  
alkyl <containing 1-10 C> (substd. by alkoxycarbonyl  
<containing 1-10 C>)  
G14 = alkylene <containing 1-10 C> (opt. substd. by CO<sub>2</sub>H)  
G15 = carbon chain <containing 1-10 C, saturated>  
(opt. substd. by CO<sub>2</sub>H)

G16 = 173 / 176



- G17 = NH (opt. substd.)
- G20 = carbocycle <containing 6-10 C, aromatic, bonds all normalized, mono- or bicyclic, (1-2) 6-membered rings only> / carbocycle <containing 13 C, aromatic, 12 normalized bonds, 4 C fusion atoms, tricyclic, (1) 5-membered, (2) 6-membered rings only>
- G21 = H / alkoxy <containing 1-10 C> (opt. substd. by 1 or more G20) / CO<sub>2</sub>H / alkoxy carbonyl <containing 1-10 C> / alkoxy carbonylamino <containing 1-10 C> / cycloalkyl <containing 3-8 C> (opt. substd. by CO<sub>2</sub>H) / Ph (opt. substd.) / NH<sub>2</sub> (opt. substd.) / heterocycle <containing 1-4 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms), mono- or bicyclic, (0-2) 5-membered, (0-1) 6-membered, (0-1) 7-membered rings only> (opt. substd.) / alkyl (opt. substd.)
- G23 = H / alkyl (opt. substd.) / heterocycle <containing 1-4 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms), mono- or bicyclic, (0-2) 5-membered, (0-1) 6-membered, (0-1) 7-membered rings only> (opt. substd.)
- G24 = C(O) / SO<sub>2</sub> / 187-24 188-53 / 190-24 189-53 / 192-24 191-53 / 194-24 195-53



Patent location: disclosure

Note: substitution is restricted

Note: epoxide, oximido and oxo formations on the camphor rings also disclosed

L29 ANSWER 30 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 126:8118 MARPAT

TITLE: 1,3-Dihydro-1-(phenylalkyl)-2H-imidazol-2-one derivatives having PDE IV and cytokine activity

INVENTOR(S): Freyne, Eddy Jean Edgard; Diels, Gaston Stanislas Marcell; Andres, Gil Jose Ignacio; Fernandez, Gadea Francisco Javi

PATENT ASSIGNEE(S): Janssen Pharmaceutica N.V., Belg.

SOURCE: PCT Int. Appl., 64 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

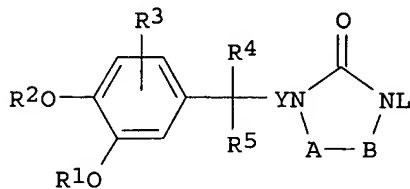
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

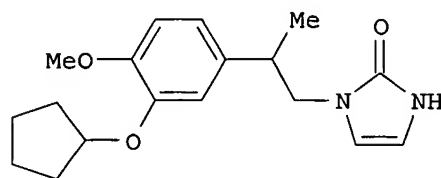
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2216653	AA	19961010	CA 1996-2216653	19960328
AU 9652755	A1	19961023	AU 1996-52755	19960328
AU 702947	B2	19990311		
EP 819122	A1	19980121	EP 1996-909150	19960328
EP 819122	B1	20020306		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, SI, FI				
CN 1181072	A	19980506	CN 1996-193101	19960328
CN 1068591	B	20010718		
JP 11503136	T2	19990323	JP 1996-529959	19960328
AT 214052	E	20020315	AT 1996-909150	19960328
PT 819122	T	20020830	PT 1996-909150	19960328
ES 2174064	T3	20021101	ES 1996-909150	19960328
CZ 293127	B6	20040218	CZ 1997-3149	19960328
PL 187375	B1	20040630	PL 1996-322654	19960328
IL 117807	A1	20010614	IL 1996-117807	19960403
ZA 9602754	A	19971006	ZA 1996-2754	19960404
US 5994376	A	19991130	US 1997-930296	19970929
NO 9704602	A	19971006	NO 1997-4602	19971006
NO 314339	B1	20030310		
HK 1007880	A1	20020705	HK 1998-108913	19980707
US 2002068830	A1	20020606	US 1999-362007	19990727
US 6403805	B2	20020611		
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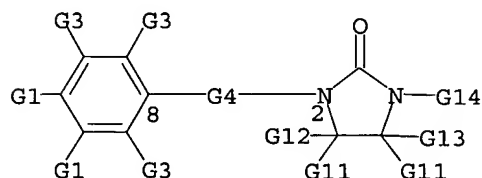
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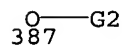
II

AB The invention describes the use of compds. for the manufacture of medicaments for treating disease states related to abnormal enzymic or catalytic activity of phosphodiesterase IV (PDE IV), and/or disease states related to a detrimental excess of cytokines, in particular allergic, atopic, and inflammatory diseases. The compds. have formula I, and include the N-oxide forms, acid or base addition salts, and stereoisomers [wherein R<sub>1</sub>, R<sub>2</sub> = H, alkyl, CHF<sub>2</sub>, CF<sub>3</sub>, cycloalkyl, saturated heterocyclyl, indanyl, aralkyl, etc.; R<sub>3</sub> = H, halo, alkoxy; R<sub>4</sub> = H, halo, alkyl, CF<sub>3</sub>, cycloalkyl, CO<sub>2</sub>H, alkoxy carbonyl, aryl, heterocyclyl, OH, (un)substituted alkoxy or amino, etc.; R<sub>5</sub> = H, halo, OH, alkyl; or R<sub>4</sub>R<sub>5</sub> = (CH<sub>2</sub>)<sub>n</sub>, CH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>, CH<sub>2</sub>CH<sub>2</sub>NHCH<sub>2</sub>CH<sub>2</sub> or N-derivs., CH<sub>2</sub>CH:CHCH<sub>2</sub> (n = 2-5); Y = bond, (halo)alkanediyl; AB = (un)substituted CH:CH or CH<sub>2</sub>CH<sub>2</sub>; L = H, alkyl,

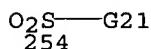
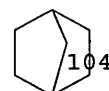
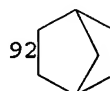
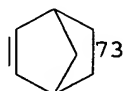
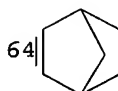
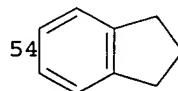
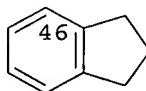
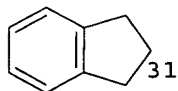
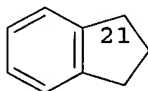
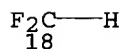
alkanoyl, alkoxycarbonyl, (un)substituted alk(en)yl, etc.]. The invention also relates to new compds. having said activities, processes for their preparation, and compns. comprising the new compds. For example, 3-(cyclopentyloxy)-4-methoxy- $\beta$ -methylbenzeneethanamine (preparation given) was subjected to a sequence of N-acylation with  $\text{ClCO}_2\text{Ph}$  (78%), amidation of the resulting carbamate with  $(\text{MeO})_2\text{CHCH}_2\text{NH}_2$  (97%), and deprotection-cyclization with  $\text{HCl}$  in aqueous  $\text{MeOH}$  (60%), to give title compound II. The in vitro  $\text{IC}_{50}$  of II against human recombinant PDE IV B was  $4.8 \times 10^{-9}$  M. II also gave 83.1% inhibition of dextran-induced ear edema in mice at 5 mg/kg orally.

**MSTR 1**

G1 = OH / 387

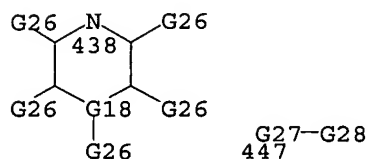
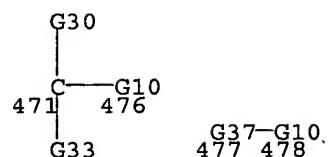


G2 = alkyl <containing 1-6 C> / 18 /  $\text{CF}_3$  /  
 cycloalkyl <containing 3-6 C> /  
 heterocycle <containing 1-2 heteroatoms, zero or more O,  
 zero or more S, zero or more N (no other heteroatoms),  
 non-aromatic, saturated, 5- to 7-membered monocyclic ring> /  
 21 / 31 / 46 / 54 / 58 / 64 / 73 / 83 / 86 / 92 / 104 / 254 /  
 alkyl <containing 1-10 C> (opt. substd. by (1-2) G23) /  
 (Specifically claimed: Me / cyclopentyl)

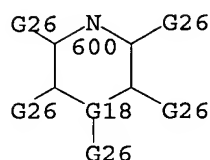
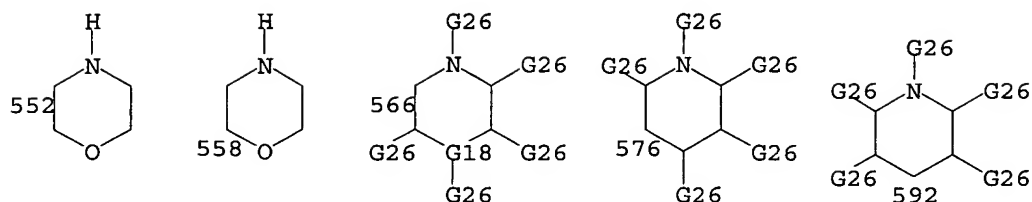


G3 = 2 or more H / F / Cl / Br / I /  
 alkoxy <containing 1-6 C>

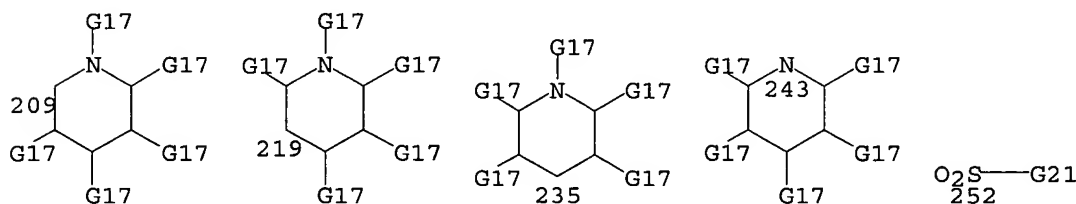
G4 = 108 / 112 / 116 / 449 / 454 / 462 / 465-8 474-2 /  
 468-8 475-2 / 471-8 476-2 / 477-8 478-2



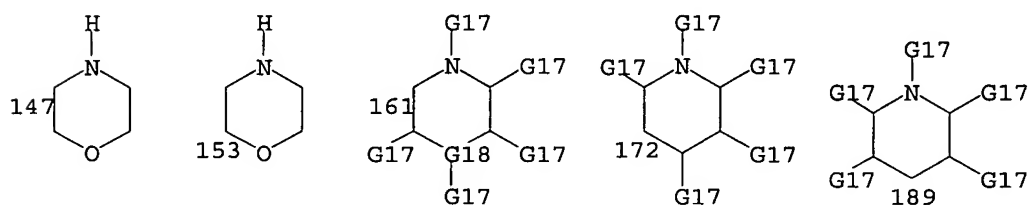
Page 141



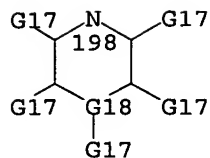
- G10 = alkylene <containing 1-4 C>  
(opt. substd. by 1 or more G16) / (Specifically claimed: CH2)
- G11 = H / alkyl <containing 1-4 C>
- G12 = H
- G13 = H
- G14 = H / alkyl <containing 1-6 C>  
(opt. substd. by (1-2) G15) / alkylcarbonyl <containing 1-6 C> /  
alkoxycarbonyl <containing 1-6 C> /  
alkenyl <containing 3-6 C> (opt. substd. by G19) / 209 /  
219 / 235 / 243 / 252



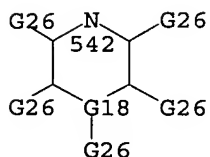
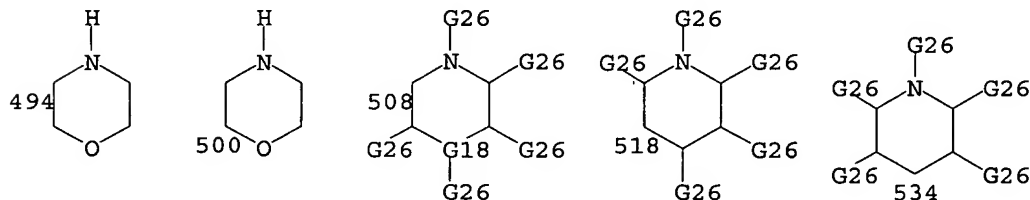
- G15 = OH / alkoxy <containing 1-4 C> /  
alkoxycarbonyl <containing 1-4 C> /  
alkylamino <containing 1-4 C> /  
dialkylamino <each alkyl containing 1-4 C> /  
Ph (opt. substd.) / morpholino / 147 / 153 / 161 / 172 /  
189 / 198 / pyridyl (opt. substd. by alkyl <containing 1-4 C>  
) / furyl (opt. substd. by alkyl <containing 1-4 C>) /  
thienyl (opt. substd. by G20)





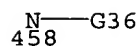


- G16 = F / Cl / Br / I  
 G17 = H / alkyl <containing 1-4 C>  
       (opt. substd. by 1 or more G19)  
 G18 = N / CH  
 G19 = Ph (opt. substd.)  
 G20 = alkyl <containing 1-4 C> /  
       alkylcarbonylamino <containing 1-4 C>  
 G21 = alkyl <containing 1-6 C> / Ph (opt. substd.)  
 G23 = Ph (opt. substd.) / pyridyl / thienyl / furyl /  
       cycloalkyl <containing 3-7 C> /  
       heterocycle <containing 1-2 heteroatoms, zero or more O,  
       zero or more S, zero or more N (no other heteroatoms),  
       non-aromatic, saturated, 5- to 7-membered monocyclic ring>  
 G26 = H / R  
 G27 = O / NH  
 G28 = alkyl <containing 1-6 C>  
       (opt. substd. by 1 or more G29) / Ph (opt. substd.) /  
       pyridyl (opt. substd.) / furyl (opt. substd.) /  
       thienyl (opt. substd.) / imidazolyl (opt. substd.) /  
       thiazolyl (opt. substd.) / oxazolyl (opt. substd.) /  
       isoquinolinyl (opt. substd.) / quinolinyl (opt. substd.) /  
       morpholino / 494 / 500 / 508 / 518 / 534 / 542



- G29 = OH / CO<sub>2</sub>H / alkoxy carbonyl <containing 1-4 C> /  
       NH<sub>2</sub> / alkylamino <containing 1-4 C> /  
       dialkylamino <each alkyl containing 1-4 C>  
 G30 = alkyl <containing 1-6 C> (opt. substd. by G6) /  
       CF<sub>3</sub> / CO<sub>2</sub>H / alkoxy carbonyl <containing 1-4 C> /  
       cycloalkylaminocarbonyl <containing 3-6 C>  
 G31 = H / F / Cl / Br / I / OH / alkyl <containing 1-6 C>  
 G32 = H / F / Cl / Br / I / OH  
 G33 = alkyl <containing 1-6 C>  
 G34 = (1-4) CH<sub>2</sub>

G35 = O / 458



G36 = H / alkyl <containing 1-6 C> /  
 alkylsulfonyl <containing 1-6 C> / p-C6H4Me  
 G37 = 479 / 484 / 490



G12+G13= bond

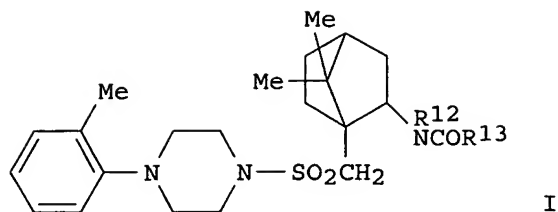
Derivative: and pharmaceutically acceptable salts or N-oxides  
 Patent location: claim 1  
 Note: also incorporates claim 20, structure II  
 Stereochemistry: or stereochemically isomeric forms

L29 ANSWER 31 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 125:67734 MARPAT  
 TITLE: Method for improving reproductive efficiency in farm  
 animals by administration of an oxytocin receptor  
 antagonist  
 INVENTOR(S): Hickey, Gerald J.; Pettibone, Douglas J.  
 PATENT ASSIGNEE(S): Merck and Co., Inc., USA  
 SOURCE: PCT Int. Appl., 93 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

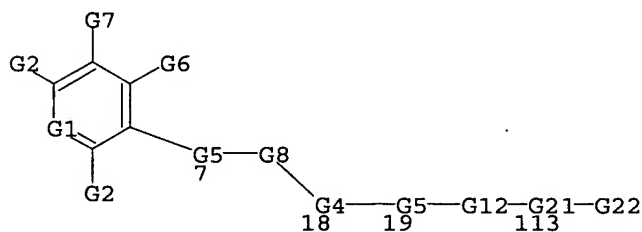
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9609824	A1	19960404	WO 1995-US12273	19950926
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, IS, JP, KG, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TT, UA, UG, US, UZ				
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5599809	A	19970204	US 1994-314840	19940929
AU 9536417	A1	19960419	AU 1995-36417	19950926
EP 783306	A1	19970716	EP 1995-933946	19950926
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
PRIORITY APPLN. INFO.:			US 1994-314840	19940929
			WO 1995-US12273	19950926

GI



AB Oxytocin receptor antagonists of formula (I) wherein R12 is hydrogen, alkoxy carbonyl or unsubstituted or substituted alkyl; R13 is hydrogen, alkoxy, aralkoxy, alkoxy carbonyl, alkoxy carbonylamino, unsubstituted or substituted cycloalkyl, unsubstituted or substituted Ph, unsubstituted or substituted amino, unsubstituted or substituted heterocyclic rings, or unsubstituted or substituted alkyl, and the pharmaceutically acceptable salts thereof, are useful for increasing fertility rates and embryonic survival in farm animals. The compds. are also useful for improving survival rates of farm animal neonates by controlling the timing of parturition to effect delivery of the neonates during daylight hours, thereby ensuring proper monitoring of the neonates. Addnl., the compds. are useful for controlling the timing of estrus. Thus, 1-((7,7-dimethyl-2-endo-(2S-amino-4-(methylsulfonyl)butyramido)bicyclo(2.2.1)heptan-1-yl)methanesulfonyl)-4-(2-methylphenyl)piperazine is useful for controlling the timing of parturition in farm animals. It is administered to the mother on the evening before expected delivery to delay parturition so that the delivery occurs during the daylight hours. By delaying the timing of parturition, proper monitoring of the delivery and the neonates is ensured resulting in increased survival rates of the newborns. A preferred oral dose of 20 mg/kg/day is used.

## MSTR 1



G1 = N / 14

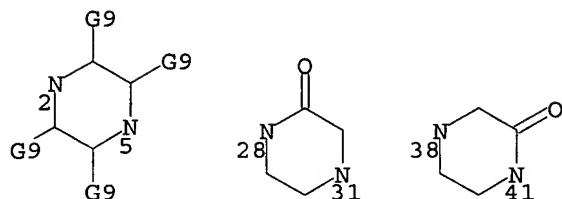
$\overset{\text{C}}{\underset{14}{\text{---}}} \text{G2}$

G2 = H / F / Cl / Br / I / alkylsulfonyl <containing 1-10 C> / alkoxy <containing 1-10 C> / alkyl <containing 1-10 C> (opt. substd. by G3)

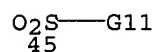
G3 = OH / alkoxy <containing 1-10 C> / alkylsulfonyl <containing 1-10 C> / NH2 / alkylamino <containing 1-10 C> / dialkylamino <each alkyl containing 1-10 C>

G4 = C(O) / SO2

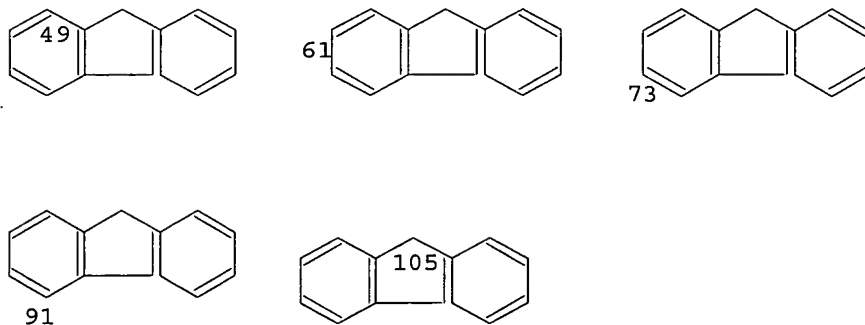
G5 = bond / CH2  
 G6 = H / alkyl <containing 1-10 C> / NH2 /  
 (Specifically claimed: Me)  
 G7 = H  
 G8 = 2-7 5-18 / 28-7 31-18 / 38-7 41-18



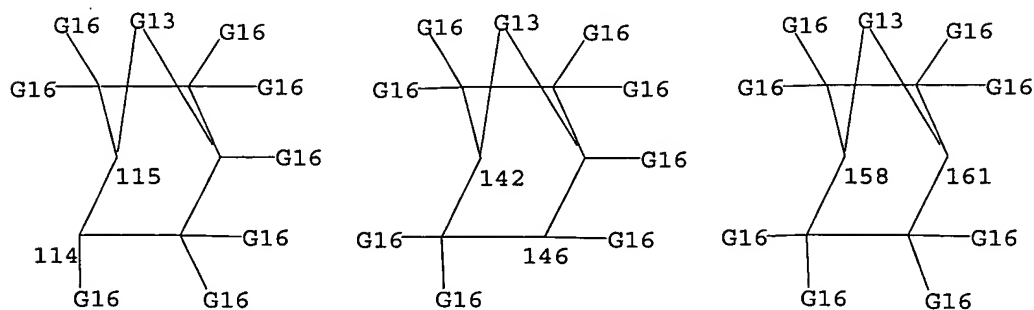
G9 = H / alkyl <containing 1-10 C> (opt. substd. by G10)  
 G10 = NH2 / OH / alkoxy <containing 1-10 C> /  
 alkylsulfonyl <containing 1-10 C> / 45 /  
 alkylamino <containing 1-10 C> /  
 dialkylamino <each alkyl containing 1-10 C> /  
 alkyl <containing 1-10 C> (substd. by Ph)

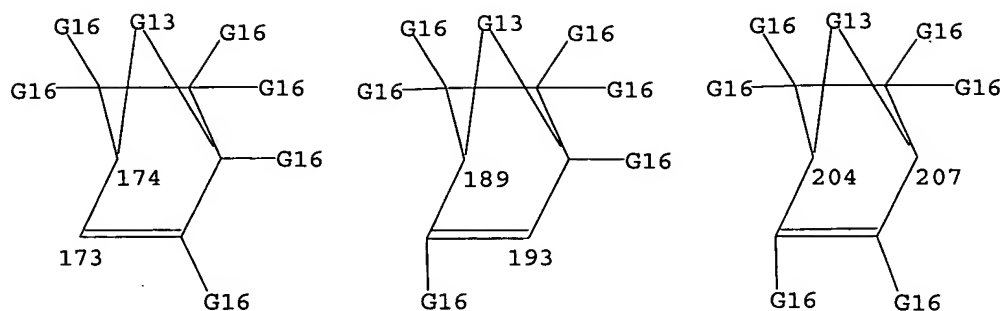


G11 = Ph / naphthyl / 49 / 61 / 73 / 91 / 105

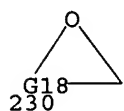


G12 = 115-19 114-113 / 142-19 146-113 /  
 158-19 161-113 / 174-19 173-113 / 189-19 193-113 /  
 204-19 207-113 / 218 / 230

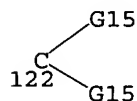




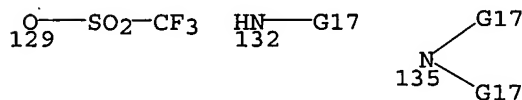
G18=G20  
218



G13 = 122 / cycloalkylene <containing 3-8 C,  
attached through 1 or more C> (opt. substd. by G14)



G14 = OH / alkyl <containing 1-10 C> (substd. by OH)  
G15 = H / alkyl <containing 1-10 C> /  
(Specifically claimed: Me)  
G16 = H / OH / F / Cl / Br / I / Me / CO<sub>2</sub>H /  
alkoxycarbonyl <containing 1-10 C> /  
alkylcarbonyloxy <containing 1-10 C> /  
alkoxy <containing 1-10 C> (substd. by alkoxycarbonyl  
<containing 1-10 C>) / OSO<sub>3</sub>H / 129 / NH<sub>2</sub> / 132 / 135



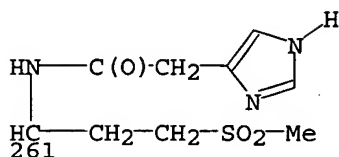
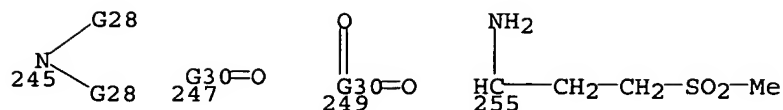
G17 = alkyl <containing 1-10 C> (opt. substd. by CO<sub>2</sub>H) /  
alkyl <containing 1-10 C> (substd. by alkoxycarbonyl  
<containing 1-10 C>)  
G18 = carbocycle <containing 7 or more C, non-aromatic,  
up to 1 double bond, up to 3 C fusion atoms, 2-3 rings,  
(0-1) 3-membered, (0-1) 4-membered, (2-3) 5-membered,  
(0-1) 6-membered rings only> (opt. substd. by 1 or more G19)  
G19 = OH / F / Cl / Br / I / Me / CO<sub>2</sub>H /  
alkoxycarbonyl <containing 1-10 C> /

$$\begin{array}{ccc} \text{O} & \text{HN} & \\ | & | & \\ 220 & \text{SO}_2\text{CF}_3 & 223\text{-G17} \end{array}$$
$$\begin{array}{c} \text{N} \text{---} \text{OH} \\ 228 \end{array}$$
$$\begin{array}{c} \text{G23}-\text{C}(\text{O})-\text{G26} \\ \text{234} \end{array} \quad \begin{array}{c} \text{G31} \\ | \\ \text{C}(\text{O})-\text{N}-\text{G31} \\ \text{237} \end{array}$$

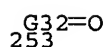
N—G24  
240

O<sub>2</sub>S—G11  
242

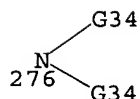
Page 148



- G27 = CO<sub>2</sub>H / alkyl <containing 1-10 C> (substd. by CO<sub>2</sub>H) / SO<sub>3</sub>H  
 G28 = H / alkyl <containing 1-10 C> (opt. substd. by 1 or more G29)  
 G29 = CO<sub>2</sub>H / alkylsulfonyl <containing 1-10 C> / heterocycle <containing 1-2 heteroatoms, 1-2 N (no other heteroatoms), 5-membered monocyclic ring>  
 G30 = heterocycle <containing 1-4 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms), 5- to 7-membered monocyclic ring> (opt. substd.)  
 G31 = H / alkyl <containing 1-10 C> (opt. substd.) / heterocycle <containing 5-8 atoms, 1-4 heteroatoms, 1-4 N (no other heteroatoms), 5- to 8-membered monocyclic ring> (opt. substd.) / heterocycle <containing 5-6 atoms, 1-2 heteroatoms, 1-2 O (no other heteroatoms), 5- to 6-membered monocyclic ring> (opt. substd.) / heterocycle <containing 5-6 atoms, 1 heteroatom, 1 S (no other heteroatoms), 5- to 6-membered monocyclic ring> (opt. substd.) / heterocycle <containing 6 atoms, 2 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms), 6-membered monocyclic ring> (opt. substd.) / 253



- G32 = heterocycle <containing 5-8 atoms, 1-4 heteroatoms, 1-4 N (no other heteroatoms), 5- to 8-membered monocyclic ring> (opt. substd.) / heterocycle <containing 5-6 atoms, 1-2 heteroatoms, 1-2 O (no other heteroatoms), 5- to 6-membered monocyclic ring> (opt. substd.) / heterocycle <containing 5-6 atoms, 1 heteroatom, 1 S (no other heteroatoms), 5- to 6-membered monocyclic ring> (opt. substd.) / heterocycle <containing 6 atoms, 2 heteroatoms, zero or more N, zero or more O, zero or more S (no other heteroatoms), 6-membered monocyclic ring> (opt. substd.)  
 G33 = R / alkylsulfonyl <containing 1-10 C> / 276



G34 = H / R / alkylcarbonyl (opt. substd. by heterocycle  
<containing 5 atoms, 1-2 heteroatoms,  
1-2 N (no other heteroatoms), 3-4 C,  
5-membered monocyclic ring>)

G6 +G7 = CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub> / CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>

Derivative: and pharmaceutically acceptable salts

Patent location: claim 1

Note: substitution is restricted

L29 ANSWER 32 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 122:81117 MARPAT

TITLE: Preparation of indole-2-carboxamides as LDL and  
membrane lipid oxidation inhibitors

INVENTOR(S): Caubere, Paul; Jamart-Gregoire, Brigitte; Caubere,  
Catherine; Bizot-Espiard, Jean-Guy; Renard, Pierre;  
Adam, Gerard

PATENT ASSIGNEE(S): Adir et Cie., Fr.

SOURCE: Eur. Pat. Appl., 21 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

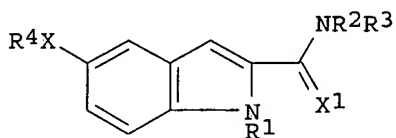
LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 624575	A1	19941117	EP 1994-401050	19940511
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
FR 2705095	A1	19941118	FR 1993-5686	19930512
FR 2705095	B1	19950623		
AU 9461974	A1	19940915	AU 1994-61974	19940510
CA 2123267	AA	19941113	CA 1994-2123267	19940510
ZA 9403255	A	19950111	ZA 1994-3255	19940511
JP 07002770	A2	19950106	JP 1994-98813	19940512
PRIORITY APPLN. INFO.:			FR 1993-5686	19930512

GI



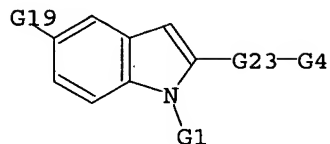
I

AB Title compds. [I; R<sub>1</sub> = H, (un)substituted alkyl; R<sub>2</sub> = H, (un)substituted  
alkyl, -cycloaliph. group; R<sub>3</sub> = cycloaliph. group, Ph, heteroaryl, etc.;  
NR<sub>2</sub>R<sub>3</sub> = heterocyclyl; R<sub>4</sub> = H, alkyl, (hetero)aryl(alkyl), etc.; X = O or  
S; X<sub>1</sub> = O, S, H<sub>2</sub>] were prepared Thus, 5-methoxyindole-2-carboxylic acid was  
amidated by PhNHMe to give I (R<sub>1</sub> = H, R<sub>2</sub> = R<sub>4</sub> = Me, R<sub>3</sub> = Ph, X = X<sub>1</sub> = O).  
I had IC<sub>50</sub> of 10<sup>-7</sup>M against Ag<sub>2</sub>SO<sub>4</sub> production of CH<sub>2</sub>(CHO)<sub>2</sub> from human LDL in



. vitro.

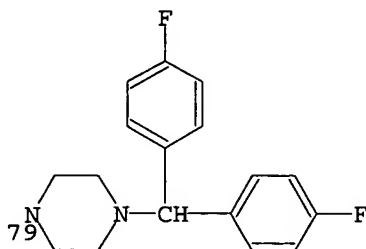
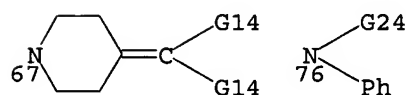
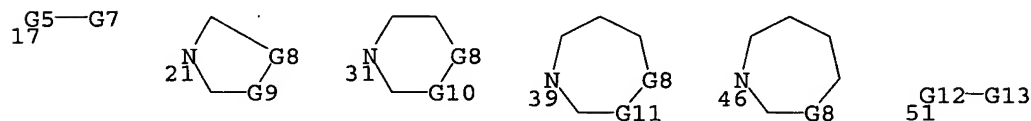
## MSTR 1



- G1 = H / alkyl <containing 1-5 C>  
(opt. substd. by 1 or more G2) / (Specifically claimed: Me)
- G2 = halo / OH / NO<sub>2</sub> / CN /  
alkyl <containing 1-5 C> (opt. substd. by 1 or more halo) /  
alkoxy <containing 1-5 C> / 15 /  
alkylcarbonyl <containing 1-4 C> / NHCHO /  
alkylcarbonylamino <containing 1-4 C> / NH<sub>2</sub> /  
alkylamino <containing 1-5 C> /  
dialkylamino <each alkyl containing 1-5 C>

<sup>15</sup>C(O)-G3

- G3 = H / OH / alkoxy <containing 1-5 C> / NH<sub>2</sub> /  
alkylamino <containing 1-5 C> /  
dialkylamino <each alkyl containing 1-5 C>
- G4 = 17 / 21 / 31 / 39 / 46 /  
heterocycle <containing 1-2 heteroatoms, 1 N,  
zero or more O (no other heteroatoms), 2-5 C,  
attached through 1 N, non-aromatic, saturated,  
4- to 7-membered monocyclic ring>  
(opt. substd. by 1 or more G2) / 51 / 67 /  
(Specifically claimed: 76 / 79)



- G5 = NH / 19

<sup>19</sup>N-G6

G25-G13  
27

G14 = Ph (opt. substd. by 1 or more G15)  
 G15 = halo / OH / alkyl <containing 1-5 C>  
 (opt. substd. by 1 or more halo) / alkoxy <containing 1-5 C>  
 G16 = C(O) / CH2  
 G17 = 63 / N

C—G18  
 63

G18 = H / halo / OH / alkyl <containing 1-5 C>  
 (opt. substd. by 1 or more halo) / alkoxy <containing 1-5 C>  
 G19 = OH / SH / 74

G20—G21  
 74

G20 = O / S  
 G21 = alkyl <containing 1-5 C>  
 (opt. substd. by 1 or more G2) / Ph / naphthyl /  
 carbocycle <containing 6-10 C, aromatic,  
 bonds all normalized, mono- or bicyclic,  
 (1-2) 6-membered rings only> (opt. substd. by 1 or more G2) /  
 furyl / thienyl / thiazolyl / pyrrolyl / imidazolyl /  
 pyridyl / pyrimidinyl / pyrazolyl / pyrazinyl / pyridazinyl /  
 quinolinyl / isoquinolinyl / indolyl / benzofuranyl /  
 benzothienyl / benzimidazolyl /  
 heterocycle <containing 1 heteroatom, zero or more O,  
 zero or more S, zero or more N (no other heteroatoms), 4 C,  
 aromatic, 2 double bonds, 5-membered monocyclic ring>  
 (opt. substd. by 1 or more G2) /  
 heterocycle <containing 2 heteroatoms, 1-2 N,  
 up to 1 S (no other heteroatoms), 3 C, aromatic,  
 2 double bonds, 5-membered monocyclic ring>  
 (opt. substd. by 1 or more G2) /  
 heterocycle <containing 1-2 heteroatoms,  
 1-2 N (no other heteroatoms), 4-5 C, aromatic,  
 bonds all normalized, 6-membered monocyclic ring>  
 (opt. substd. by 1 or more G2) /  
 heterocycle <containing 1 heteroatom,  
 1 N (no other heteroatoms), 9 C, aromatic,  
 bonds all normalized, 2 C fusion atoms, bicyclic,  
 (2) 6-membered rings> (opt. substd. by 1 or more G2) /  
 heterocycle <containing 1 heteroatom, zero or more O,  
 zero or more S, zero or more N (no other heteroatoms), 8 C,  
 aromatic, 6 normalized bonds, 1 double bond,  
 2 C fusion atoms, bicyclic, (1) 5-membered ring,  
 (1) 6-membered ring> (opt. substd. by 1 or more G2) /  
 heterocycle <containing 2 heteroatoms,  
 2 N (no other heteroatoms), 7 C, aromatic,  
 6 normalized bonds, 1 double bond, 2 C fusion atoms,  
 bicyclic, (1) 5-membered ring, (1) 6-membered ring>  
 (opt. substd. by 1 or more G2) /  
 alkyl <containing 1-5 C> (substd. by G22) /  
 (Specifically claimed: Me / CH2Ph)  
 G22 = Ph / naphthyl / carbocycle <containing 6-10 C,  
 aromatic, bonds all normalized, mono- or bicyclic,  
 (1-2) 6-membered rings only> (opt. substd. by 1 or more G2) /

furyl / thienyl / thiazolyl / pyrrolyl / imidazolyl /  
 pyridyl / pyrimidinyl / pyrazolyl / pyrazinyl / pyridazinyl /  
 quinolinyl / isoquinolinyl / indolyl / benzofuranyl /  
 benzothienyl / benzimidazolyl /  
 heterocycle <containing 1 heteroatom, zero or more O,  
 zero or more S, zero or more N (no other heteroatoms), 4 C,  
 aromatic, 2 double bonds, 5-membered monocyclic ring>  
 (opt. substd. by 1 or more G2) /  
 heterocycle <containing 2 heteroatoms, 1-2 N,  
 up to 1 S (no other heteroatoms), 3 C, aromatic,  
 2 double bonds, 5-membered monocyclic ring>  
 (opt. substd. by 1 or more G2) /  
 heterocycle <containing 1-2 heteroatoms,  
 1-2 N (no other heteroatoms), 4-5 C, aromatic,  
 bonds all normalized, 6-membered monocyclic ring>  
 (opt. substd. by 1 or more G2) /  
 heterocycle <containing 1 heteroatom,  
 1 N (no other heteroatoms), 9 C, aromatic,  
 bonds all normalized, 2 C fusion atoms, bicyclic,  
 (2) 6-membered rings> (opt. substd. by 1 or more G2) /  
 heterocycle <containing 1 heteroatom, zero or more O,  
 zero or more S, zero or more N (no other heteroatoms), 8 C,  
 aromatic, 6 normalized bonds, 1 double bond,  
 2 C fusion atoms, bicyclic, (1) 5-membered ring,  
 (1) 6-membered ring> (opt. substd. by 1 or more G2) /  
 heterocycle <containing 2 heteroatoms,  
 2 N (no other heteroatoms), 7 C, aromatic,  
 6 normalized bonds, 1 double bond, 2 C fusion atoms,  
 bicyclic, (1) 5-membered ring, (1) 6-membered ring>  
 (opt. substd. by 1 or more G2)

G23 = C(O) / C(S) / CH2

G24 = Bu-n / hexyl

G25 = CH / N

Derivative: and N-oxides; and pharmaceutically acceptable acid  
 or base addition salts  
 Patent location: claim 1  
 Stereochemistry: and stereoisomers

L29 ANSWER 33 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 119:250499 MARPAT

TITLE: Preparation of 4-alkoxybenzyl amino acid piperazides  
 as antiischemic agentsINVENTOR(S): Gaudry, Michel; Pfeiffer, Bruno; Renard, Pierre;  
 Renaud de la Faverie, Jean Francois; Adam, Gerard

PATENT ASSIGNEE(S): Adir et Compagnie, Fr.

SOURCE: Can. Pat. Appl., 43 pp.

CODEN: CPXXEB

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2076443	AA	19930221	CA 1992-2076443	19920819
FR 2680508	A1	19930226	FR 1991-10431	19910820
FR 2680508	B1	19950303		
US 5340809	A	19940823	US 1992-929993	19920813

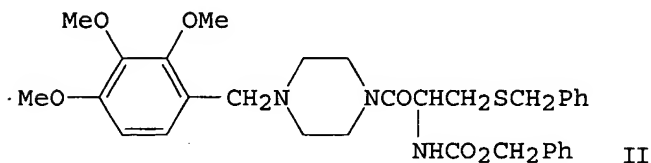
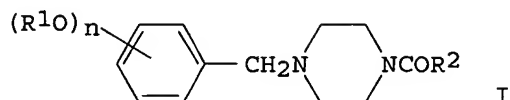
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AU 648924	B2	19940505		
ZA 9206277	A	19930303	ZA 1992-6277	19920820
EP 533516	A2	19930324	EP 1992-402309	19920820
EP 533516	A3	19930519		
EP 533516	B1	19950208		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE

JP 05208967	A2	19930820	JP 1992-221733	19920820
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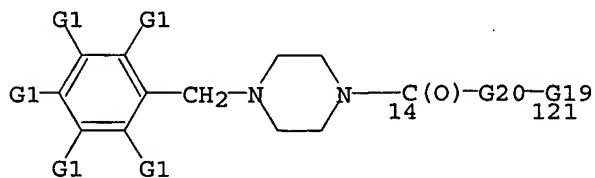
PRIORITY APPLN. INFO.:

GI



AB Title compds. [I; R1 = alkyl; R2 = CHR3(CH2)rNR4R5, CH2CH(OR12)CH2N+Me3; R3 = H; (substituted) alkyl, (CH2)mPh, etc.; R4 = H, (ar)alkyl, alkoxy carbonyl, etc.; R3R4 = atoms to complete a ring; R5 = H, (ar)alkyl, alkanoyloxy, alkoxy carbonyl, etc.; R12 = H, alkanoyl, alkoxy carbonyl, etc.; m = 0-3; n = 1-3; r = 0-2] were prepared. Thus, L-PhCH2O2CNHCH(CH2SCH2Ph)CO2H was condensed with N-hydroxysuccinimide and the product condensed with N-(2,3,4-trimethoxybenzyl)piperazine to give title compound L-II which delayed appearance of suffocation in mice in 4% O2 for 70s at 2.5 mg/kg i.p.

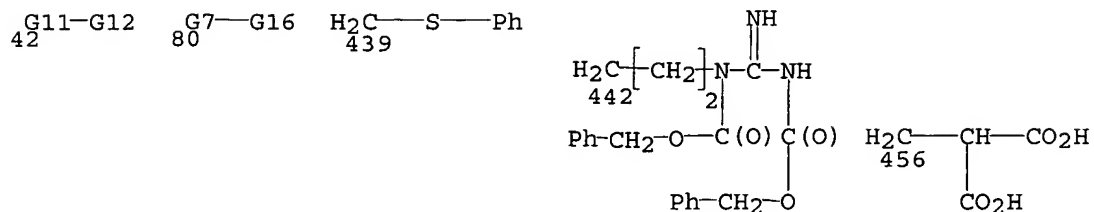
## MSTR 1A



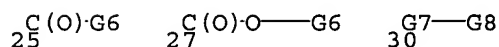
G1 = (2-4) H / alkoxy <containing 1-4 C> /  
(Specifically claimed: OMe)

G3 = (0-2) CH2

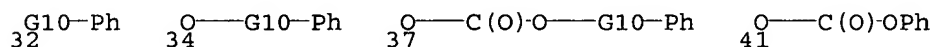
G4 = H / alkyl <containing 1-6 C>  
(opt. substd. by (1-2) G5) / 42 / 80 /  
Ph (opt. substd. by 1 or more G9) /  
naphthyl (opt. substd. by 1 or more G9) /  
(Specifically claimed: CH2SH / Me / 439 /  
CH2CH2CH2NHC(NH)NH2 / 442 / 456)



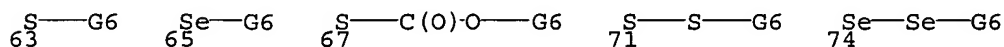
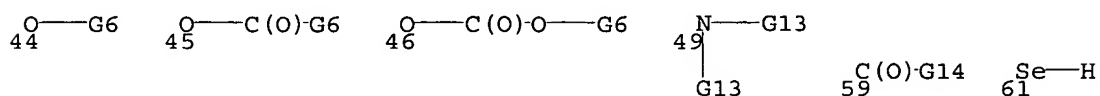
G5 = CO2H / 25 / 27 / 30 / Ph (opt. substd.) /  
naphthyl (opt. substd.) / carbocycle <containing 6-10 C,  
bonds all normalized, aromatic, mono- or bicyclic,  
(1-2) 6-membered rings only> (opt. substd. by 1 or more G9)



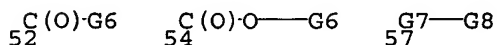
```
G6      = carbon chain <containing 1-12 C>
G7      = (1-3) CH2
G8      = Ph (opt. substd.) / naphthyl (opt. substd.) /
          carbocycle <containing 6-10 C, bonds all normalized,
          aromatic, mono- or bicyclic, (1-2) 6-membered rings only>
          (opt. substd. by 1 or more G9)
G9      = OH / halo / NO2 / CF3 / alkyl <containing 1-6 C> /
          alkoxy <containing 1-6 C> / 32 / Ph / 34 / OPh / 37 / 41
```



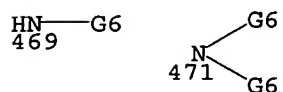
G10 = (1-3) CH2  
G11 = alkylene <containing 1-6 C>  
G12 = OH / alkoxy <containing 1-12 C> / 44 / 45 / 46 /  
49 / 59 / SH / 61 / 63 / 65 / 67 / 71 / 74 /  
NHC(NH)NH2 (opt. substd. by (1-2) G15) /  
imidazolyl (opt. substd. by 1 or more G9)



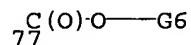
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G13      = H / alkyl <containing 1-6 C> / 52 / 54 / 57 /
          Ph (opt. substd.) / naphthyl (opt. substd.) /
          carbocycle <containing 6-10 C, bonds all normalized,
          aromatic, mono- or bicyclic, (1-2) 6-membered rings only>
          (opt. substd. by 1 or more G9)
```



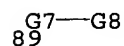
G14 = NH<sub>2</sub> / 469 / 471 / heterocycle <containing 1-2 heteroatoms, 1-2 N, up to 1 S, up to 1 O (no other heteroatoms), 5- to 7-membered monocyclic ring>



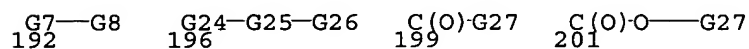
G15 = NO<sub>2</sub> / 77



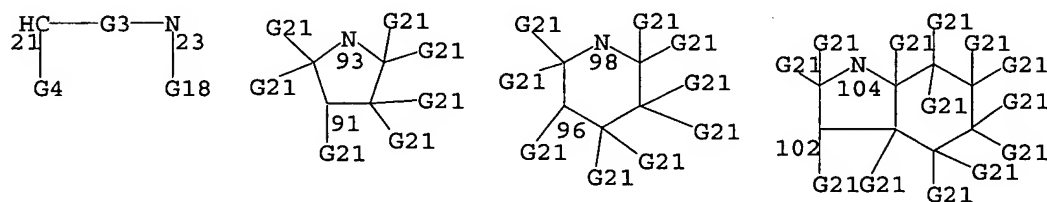
G16 = Ph (opt. substd. by 1 or more G9)  
 G18 = H / alkyl <containing 1-6 C> / 89 /  
 NHC(NH)NH<sub>2</sub> (opt. substd. by (1-2) G15) /  
 Ph (opt. substd. by 1 or more G9) /  
 naphthyl (opt. substd. by 1 or more G9)

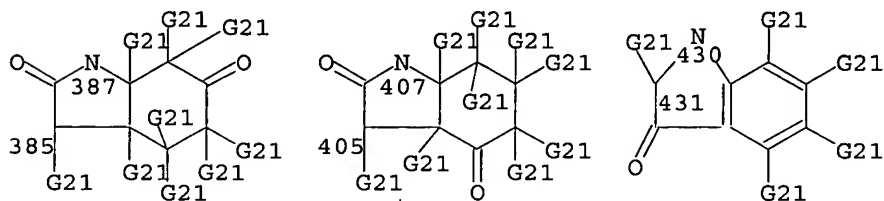
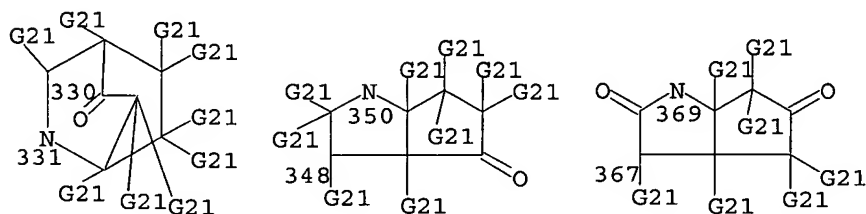
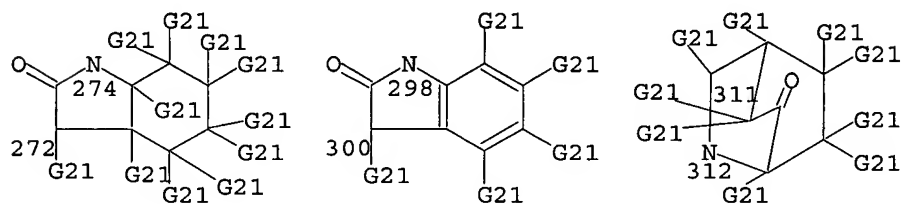
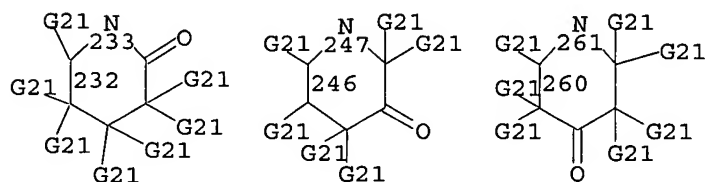
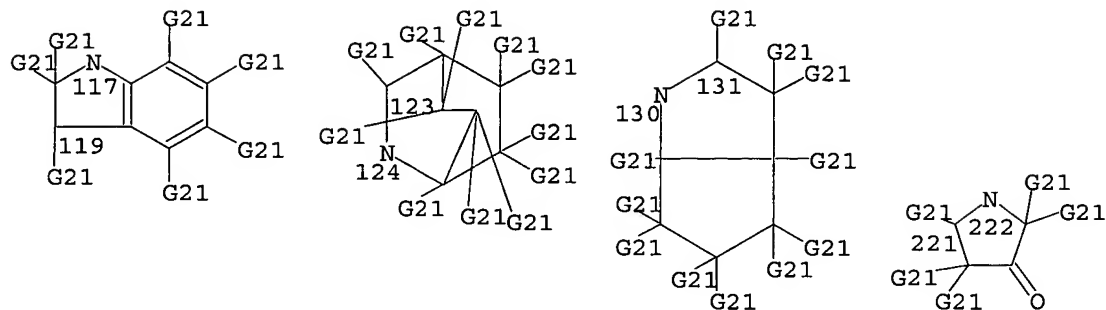


G19 = H / 192 / carbon chain <containing 1-20 C>  
 (opt. substd. by 1 or more G23) / 196 / 199 / 201



G20 = 21-14 23-121 / 91-14 93-121 / 221-14 222-121 /  
 96-14 98-121 / 232-14 233-121 / 246-14 247-121 /  
 260-14 261-121 / 102-14 104-121 / 272-14 274-121 /  
 385-14 387-121 / 405-14 407-121 / 119-14 117-121 /  
 300-14 298-121 / 431-14 430-121 / 123-14 124-121 /  
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 348-14 350-121 / 367-14 369-121





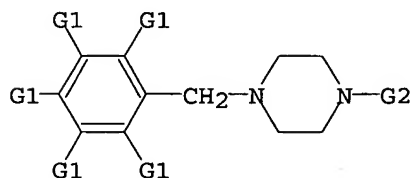
G21 = H / R  
G23 = OH / NH<sub>2</sub> / alkylamino <containing 1-6 C> /  
alkoxy <containing 1-6 C>  
G24 = carbon chain <containing 1-18 C>  
(opt. substd. by 1 or more G23)



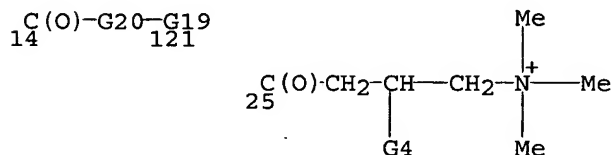
G25 = O / S / NH (opt. substd.)  
 G26 = carbon chain <containing 1-18 C>  
 (opt. substd. by 1 or more G23)  
 G27 = carbon chain <containing 1-20 C>  
 (opt. substd. by 1 or more G28) / 204 / 207

$\begin{matrix} \text{G29-G25-G30} \\ 204 \end{matrix}$      $\begin{matrix} \text{G7-G8} \\ 207 \end{matrix}$

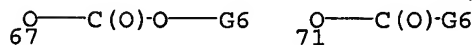
G28 = OH / NH<sub>2</sub> / alkylamino <containing 1-6 C> /  
 alkoxy <containing 1-6 C> / NHC(NH)NH<sub>2</sub> (opt. substd. by (1-2)  
 G15)  
 G29 = carbon chain <containing 1-18 C>  
 (opt. substd. by 1 or more G28)  
 G30 = carbon chain <containing 1-18 C>  
 (opt. substd. by 1 or more G28)  
 Derivative: or pharmaceutically acceptable acid or base  
 addition salts  
 Patent location: claim 1  
 Note: substitution is restricted  
 Stereochemistry: and isomers, diastereomers, epimers

**MSTR 1B**

G1 = (2-4) H / alkoxy <containing 1-4 C> /  
 (Specifically claimed: OMe)  
 G2 = 14 / 25

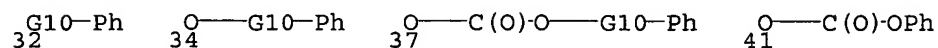


G3 = (0-2) CH<sub>2</sub>  
 G4 = OH / 67 / 71

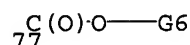


G6 = carbon chain <containing 1-12 C>  
 G7 = (1-3) CH<sub>2</sub>  
 G8 = Ph (opt. substd.) / naphthyl (opt. substd.) /  
 carbocycle <containing 6-10 C, bonds all normalized,  
 aromatic, mono- or bicyclic, (1-2) 6-membered rings only>

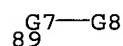
(opt. substd. by 1 or more G9)  
 G9 = OH / halo / NO2 / CF3 / alkyl <containing 1-6 C> /  
 alkoxy <containing 1-6 C> / 32 / Ph / 34 / OPh / 37 / 41



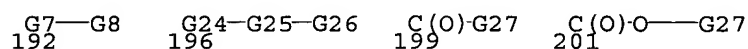
G10 = (1-3) CH2  
 G11 = alkylene <containing 1-6 C>  
 G12 = indolyl (opt. substd. by 1 or more G9)  
 G15 = NO2 / 77



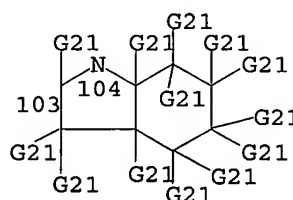
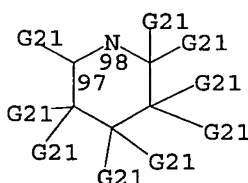
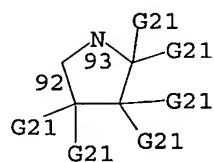
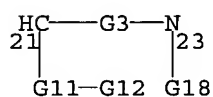
G18 = H / alkyl <containing 1-6 C> / 89 /  
 NHC(NH)NH2 (opt. substd. by (1-2) G15) /  
 Ph (opt. substd. by 1 or more G9) /  
 naphthyl (opt. substd. by 1 or more G9)

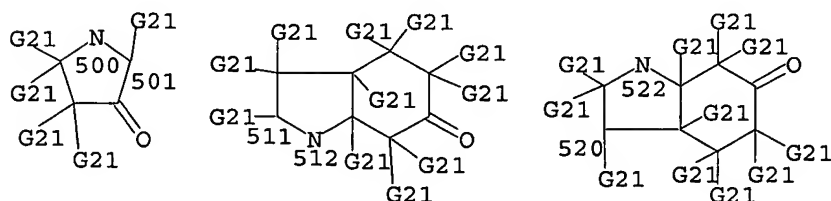
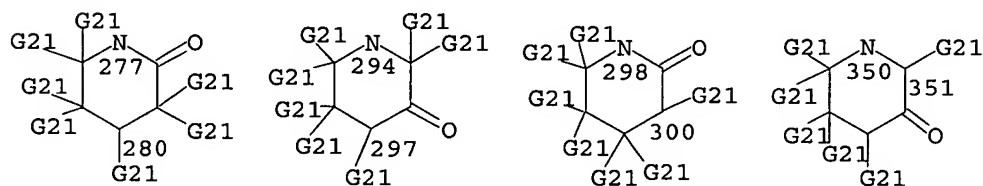
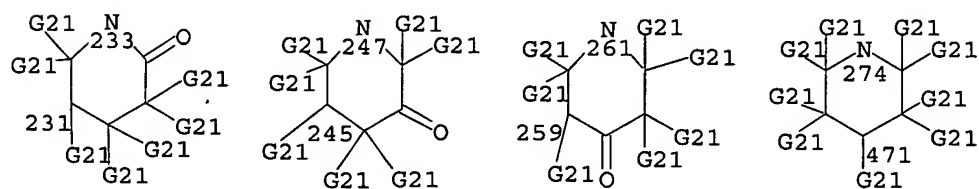
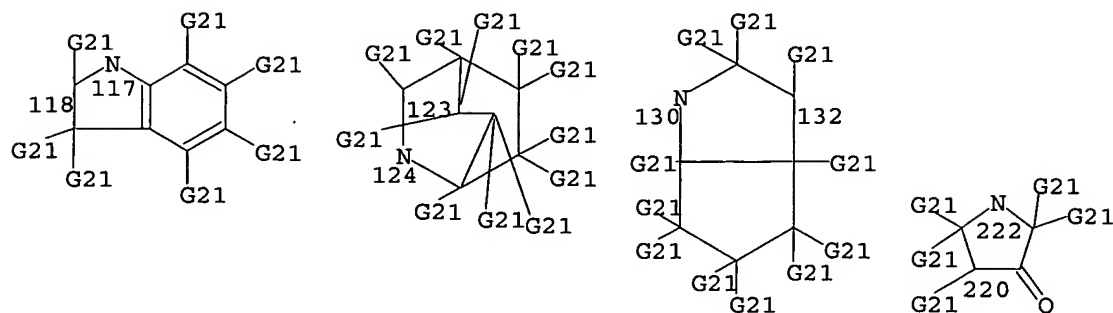


G19 = H / 192 / carbon chain <containing 1-20 C>  
 (opt. substd. by 1 or more G23) / 196 / 199 / 201



G20 = 21-14 23-121 / 92-14 93-121 / 220-14 222-121 /  
 501-14 500-121 / 97-14 98-121 / 471-14 274-121 /  
 231-14 233-121 / 280-14 277-121 / 300-14 298-121 /  
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 259-14 261-121 / 103-14 104-121 / 118-14 117-121 /  
 123-14 124-121 / 132-14 130-121 / 511-14 512-121 /  
 520-14 522-121





G21 = H / R  
 G23 = OH / NH<sub>2</sub> / alkylamino <containing 1-6 C> /  
 alkoxy <containing 1-6 C>  
 G24 = carbon chain <containing 1-18 C>  
 (opt. substd. by 1 or more G23)  
 G25 = O / S / NH (opt. substd.)  
 G26 = carbon chain <containing 1-18 C>  
 (opt. substd. by 1 or more G23)  
 G27 = carbon chain <containing 1-20 C>  
 (opt. substd. by 1 or more G28) / 204 / 207

G29-G25-G30    G7-G8  
 204                207

G28 = OH / NH<sub>2</sub> / alkylamino <containing 1-6 C> /  
alkoxy <containing 1-6 C> / NHC(NH)NH<sub>2</sub> (opt. substd. by (1-2)  
G15)  
G29 = carbon chain <containing 1-18 C>  
(opt. substd. by 1 or more G28)  
G30 = carbon chain <containing 1-18 C>  
(opt. substd. by 1 or more G28)  
Derivative: or pharmaceutically acceptable acid or base  
addition salts  
Patent location: claim 1  
Note: substitution is restricted  
Stereochemistry: and isomers, diastereomers, epimers

L29 ANSWER 34 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 119:249972 MARPAT  
TITLE: Preparation of substituted alkyl derivatives of  
piperazinylcamphorsulfonyl oxytocin antagonists  
INVENTOR(S): Erb, Jill M.; Hoffman, James B.; Perlow, Debra S.;  
Williams, Peter D.  
PATENT ASSIGNEE(S): Merck and Co., Inc., USA  
SOURCE: Eur. Pat. Appl., 83 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 4  
PATENT INFORMATION:

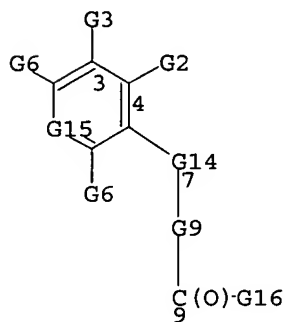
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JP 08002872	B4	19960117		
US 5648352	A	19970715	US 1995-451779	19950526
PRIORITY APPLN. INFO.:			US 1991-760270	19910916
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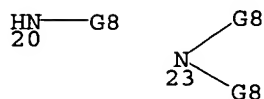
\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Title compds. [I; X = CO, SO<sub>2</sub>; Y = H, alkyl, NH; Z = C, N; R<sub>1</sub>-R<sub>4</sub> = H, halo, alkoxy, alkylsulfonyl, (substituted) alkyl; R<sub>5</sub> = H, O; R<sub>6</sub>, R<sub>7</sub> = H, alkyl; R<sub>6</sub>R<sub>7</sub> = atoms to form a (substituted) cycloalkyl ring; R<sub>8</sub>, R<sub>9</sub> = H, OH, O, halo, oximino, methylene, carboxyl, cyclic epoxide, alkoxycarbonyl, sulfonyloxy, amino, etc.; R<sub>10</sub> = (substituted) alkyl, carbonyloxy, 5-6 membered heterocyclyl; m, n, p, q = 0-2], were prepared Thus,

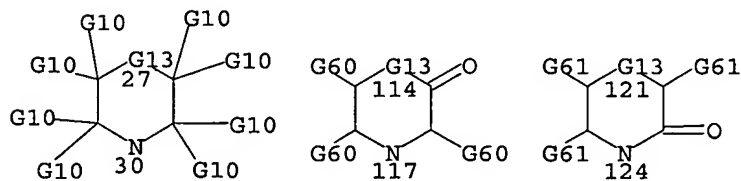
MSTR 1B



- G2 = H / alkyl <containing 1-10 C> /  
alkenyl <containing 2-10 C> / alkynyl <containing 2-10 C> /  
(Specifically claimed: Me)
- G3 = H
- G4 = (0-4) CH<sub>2</sub>
- G5 = (0-2) CH<sub>2</sub>
- G6 = H / halo / alkoxy <containing 1-10 C> /  
alkenyloxy <containing 2-10 C> /  
alkynyloxy <containing 2-10 C> /  
alkylsulfonyl <containing 1-10 C> /  
alkenylsulfonyl <containing 2-10 C> /  
alkynylsulfonyl <containing 2-10 C> /  
alkyl <containing 1-10 C> (opt. substd. by 1 or more G7) /  
alkenyl <containing 2-10 C> (opt. substd. by 1 or more G7) /  
alkynyl <containing 2-10 C> (opt. substd. by 1 or more G7)
- G7 = NH<sub>2</sub> / 20 / 23



- ```
G8      = alkyl <containing 1-10 C> /
          alkenyl <containing 2-10 C> / alkynyl <containing 2-10 C>
G9      = 27-7 30-9 / 114-7 117-9 / 121-7 124-9
```



- G10 = 6 or more H / carbon chain <containing 1-10 C,

0 or more double bonds, 0 or more triple bonds>

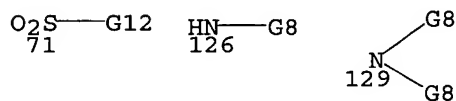
(opt. substd. by 1 or more G11) /

alkyl <containing 1-10 C> (substd. by Ph) /

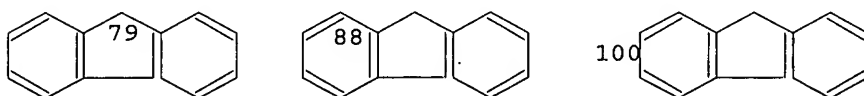
alkenyl <containing 2-10 C> (substd. by Ph) /

alkynyl <containing 2-10 C> (substd. by Ph)

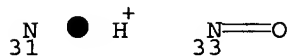
G11 = NH<sub>2</sub> / alkylsulfonyl <containing 1-10 C> /  
alkenylsulfonyl <containing 2-10 C> /  
alkynylsulfonyl <containing 2-10 C> / 71 / 126 / 129



G12 = Ph / naphthyl / 79 / 88 / 100

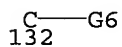


G13 = 31 / 33

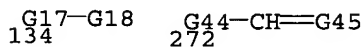


G14 = (0-2) CH<sub>2</sub>

G15 = N / 132

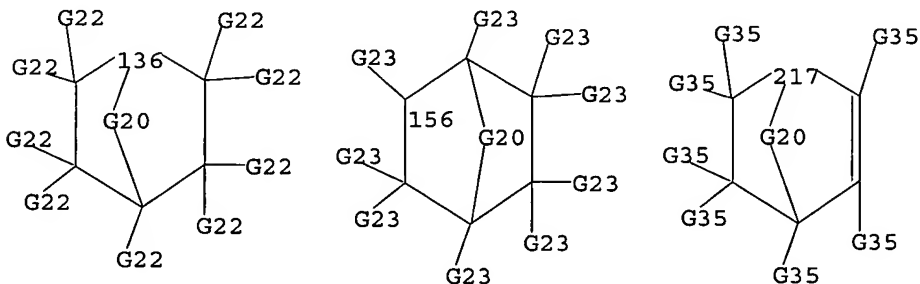


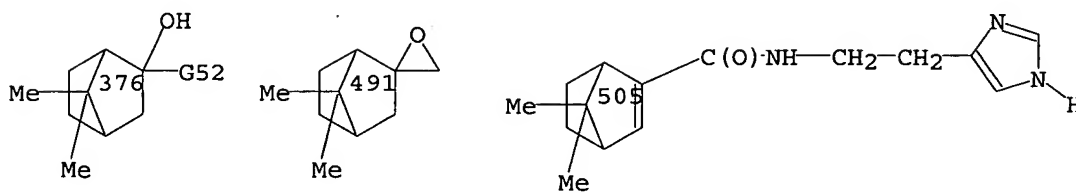
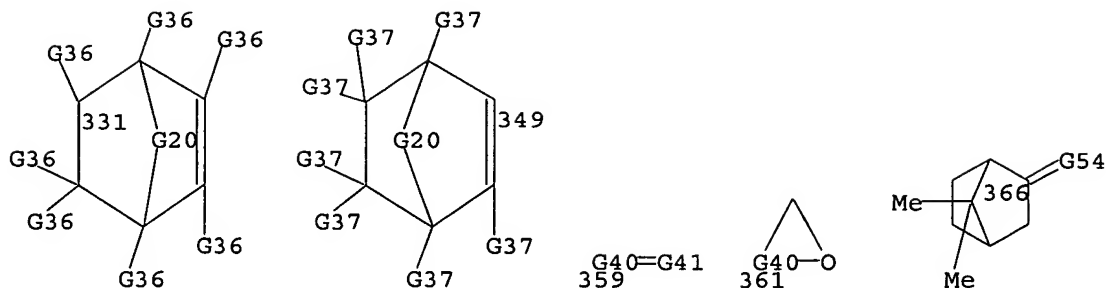
G16 = 134 / 272



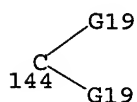
G17 = (0-2) CH<sub>2</sub>

G18 = 136 / 156 / 217 / 331 / 349 / 359 / 361 /  
(Examples: 366 / 376 / 491 / 505 / 591)

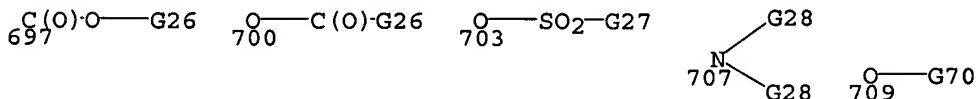




G19 = H / alkyl <containing 1-10 C> /  
alkenyl <containing 2-10 C> / alkynyl <containing 2-10 C> /  
(Specifically claimed: Me)  
G20 = 144 / carbocycle <containing 3-8 C,  
attached through 1 or more C, 0 or more double bonds,  
0 or more triple bonds> (opt. substd. by G21)



G21 = OH / alkyl <containing 1-10 C> (substd. by OH) /  
alkenyl <containing 2-10 C> (substd. by OH) /  
alkynyl <containing 2-10 C> (substd. by OH)  
G22 = 6 or more H / (up to 2) G24 / (up to 1) G25  
G23 = 6 or more H / (up to 2) G24 / (up to 1) G25  
G24 = OH / halo / CO<sub>2</sub>H / 697 / 700 / 709 / 703 / 707



G25 = carbon chain <containing 1-10 C,  
0 or more double bonds, 0 or more triple bonds>

(opt. substd. by 1 or more G30) / 263

$$\begin{array}{c} \text{G38=O} \\ 263 \end{array}$$

- G26 = carbon chain <containing 1-10 C,  
0 or more double bonds, 0 or more triple bonds>  
G27 = R / carbon chain <containing 1-10 C,  
0 or more double bonds, 0 or more triple bonds>  
(substd. by (3) halo)  
G28 = carbon chain <containing 1-10 C,  
0 or more double bonds, 0 or more triple bonds>  
(opt. substd. by CO<sub>2</sub>H) / alkyl <containing 1-10 C,  
0 or more double bonds, 0 or more triple bonds>  
(substd. by 711)

$$\begin{array}{c} \text{C(O)-O—G26} \\ 711 \end{array}$$

- G30 = R / CO<sub>2</sub>H / CN / 204

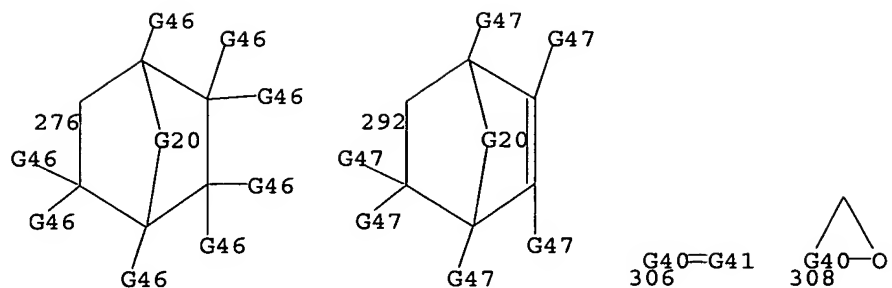
$$\begin{array}{c} \text{C(O)-O—G26} \\ 204 \end{array}$$

- G35 = 4 or more H / (up to 2) G24 / (up to 1) G25  
G36 = 4 or more H / (up to 2) G24 / (up to 1) G25  
G37 = 4 or more H / (up to 2) G24 / (up to 1) G25  
G38 = carbon chain <containing 1-10 C,  
0 or more double bonds, 0 or more triple bonds>  
(opt. substd.)  
G40 = carbocycle <containing 7 C,  
up to 1 double-exact bond, 2 C fusion atoms, bicyclic,  
(2) 5-membered rings only> (opt. substd.) /  
carbocycle <containing 8-14 C, up to 1 double-exact bond,  
3 C fusion atoms, tricyclic, (up to 1) 3-membered,  
(up to 1) 4-membered, (2-3) 5-membered,  
(up to 1) 6-membered, (up to 1) 7-membered,  
(up to 1) 8-membered rings only> (opt. substd.)  
G41 = 0 / 267 / CH<sub>2</sub> (opt. substd.)

$$\begin{array}{c} \text{N—OH} \\ 267 \end{array}$$

- G44 = (0-1) CH<sub>2</sub>  
G45 = 276 / 292 / 306 / 308



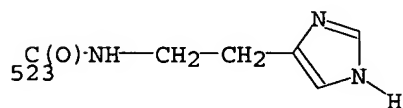
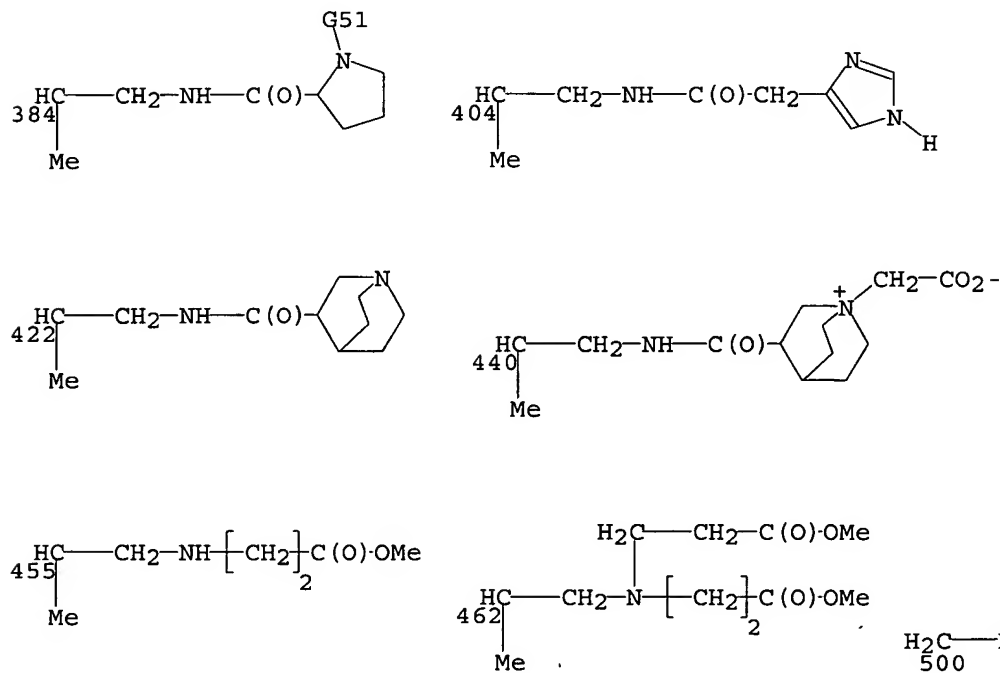


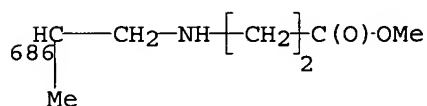
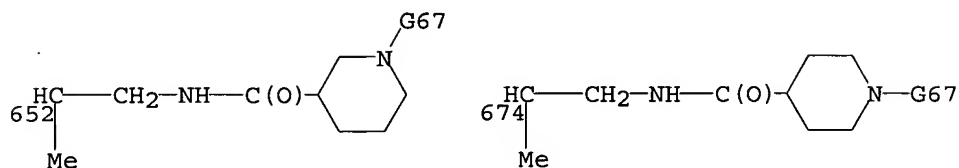
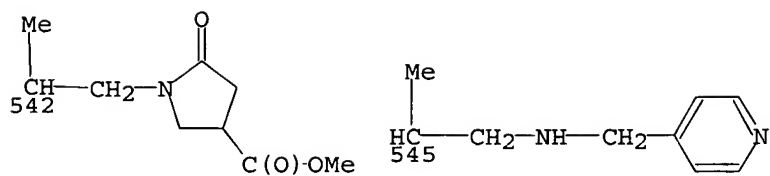
$\text{H}_2\text{C}-\text{CH}_2-\text{CH}_2-\text{C}(\text{O})-\text{G66}$      $\text{H}_2\text{C}-\text{CH}_2-\text{CH}_2-\text{CO}_2\text{H}$      $\text{H}_2\text{C}-\text{C}(\text{O})-\text{OEt}$   
 395                      400                      671

$\text{H}_2\text{C}-\text{CH}_2-\text{C}(\text{O})-\text{G68}$   
 693

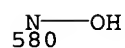
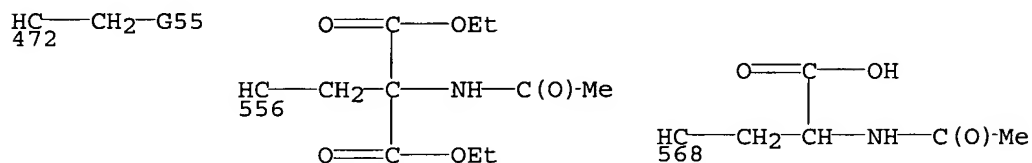
$\text{H}_2\text{C}-\text{CH}_2-\text{C}(\text{O})-\text{G68}$   
 693

G52 = 384 / 404 / 422 / 440 / 455 / 462 / 500 / 523 /  
 542 / 545 / 652 / 674 / 686

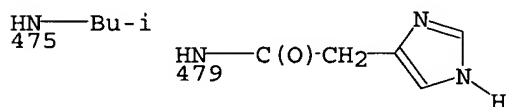




G54 = O / 472 / 556 / 568 / 580



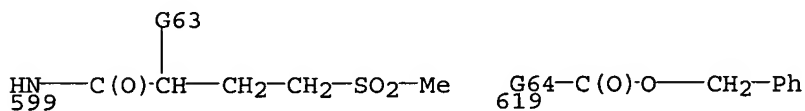
G55 = Cl / 475 / N3 / NH2 / 479

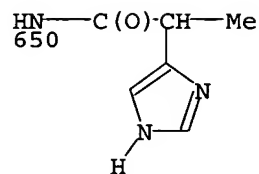
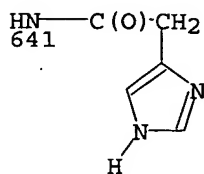
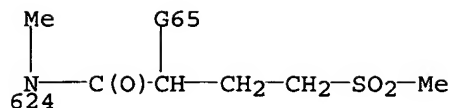


G60 = 2 or more H / R / (Example: Me)

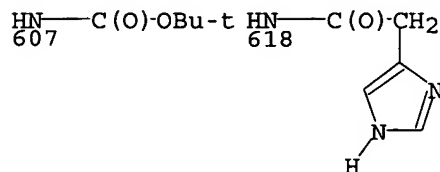
G61 = 2 or more H / R / (Example: Me)

G62 = 599 / 619 / 624 / 641 / 650





G63 = 607 / NH<sub>2</sub> / 618 / NMe<sub>2</sub>

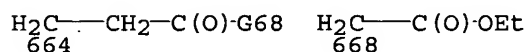


G64 = NH / NMe

G65 = NH<sub>2</sub> / NMe<sub>2</sub>

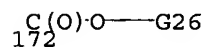
G66 = OEt / OMe

G67 = H / 664 / 668 / CH<sub>2</sub>CO<sub>2</sub>H

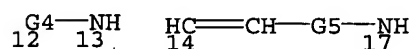


G68 = OMe / OH

G70 = carbon chain <containing 1-10 C,  
0 or more double bonds, 0 or more triple bonds>  
(substd. by 172)



G2 + G3 = 13-4 12-3 / 17-4 14-3



Patent location: claim 1

Note: substitution is restricted

L29 ANSWER 35 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 119:210708 MARPAT

TITLE: Treatment of dysmenorrhea with PAF antagnoists

INVENTOR(S): Kutter, Eberhard

PATENT ASSIGNEE(S): Boehringer Ingelheim KG, Germany

SOURCE: Ger. Offen., 8 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.

KIND DATE

APPLICATION NO. DATE

|            |    |          |                 |          |
|------------|----|----------|-----------------|----------|
| DE 4200610 | A1 | 19930715 | DE 1992-4200610 | 19920113 |
| WO 9313776 | A1 | 19930722 | WO 1993-EP47    | 19930112 |

W: JP, US

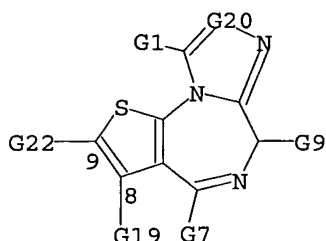
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.:

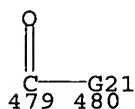
DE 1992-4200610 19920113

AB PAF antagonists are drugs for the treatment of dysmenorrhea, especially primary dysmenorrhea (no data). Suitable PAF antagonists are alprazolam, diltiazem, brotizolam, hetrazepine derivs., etc. Formulation examples are given. The PAF antagonist 2-[4-(2-chlorophenyl)-9-methyl-6H-thieno[3,2-f][1,2,4]triazolo[4,3-a][1,4]diazepin-2-yl]ethane-1-carboxylic acid morpholide was prepared by the reaction of 2-[4-(2-chlorophenyl)-9-methyl-6H-thieno[3,2-f][1,4]diazepin-2-yl]ethane-1-carboxylic acid with N-hydroxybenzotriazole and morpholine, in absolute DMF.

## MSTR 1A

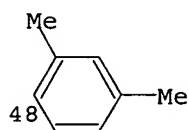
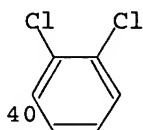


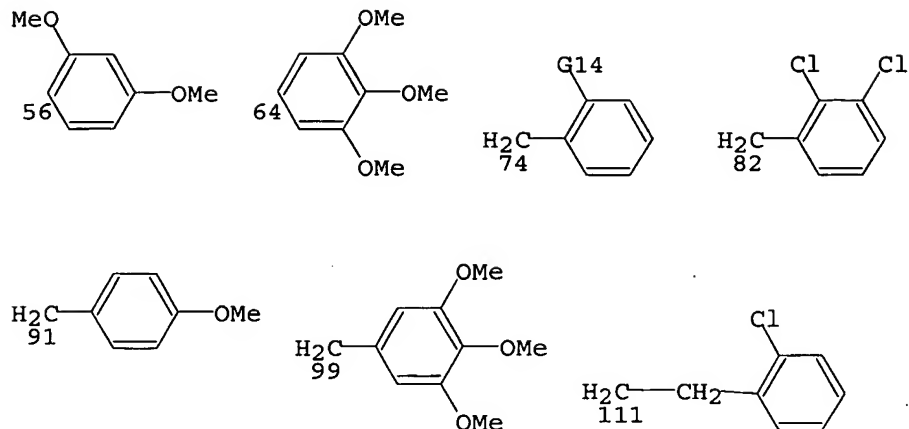
- G1 = H / alkyl <containing 1-4 C> (opt. substd. by 1 or more G18) / Me (opt. substd. by 1 or more G18) / cyclopropyl / cyclobutyl / cyclopentyl / cyclohexyl / halo / Cl / Br
- G2 = bond / alkylene <containing 1-8 C> / C(O) / 479-477 480-9



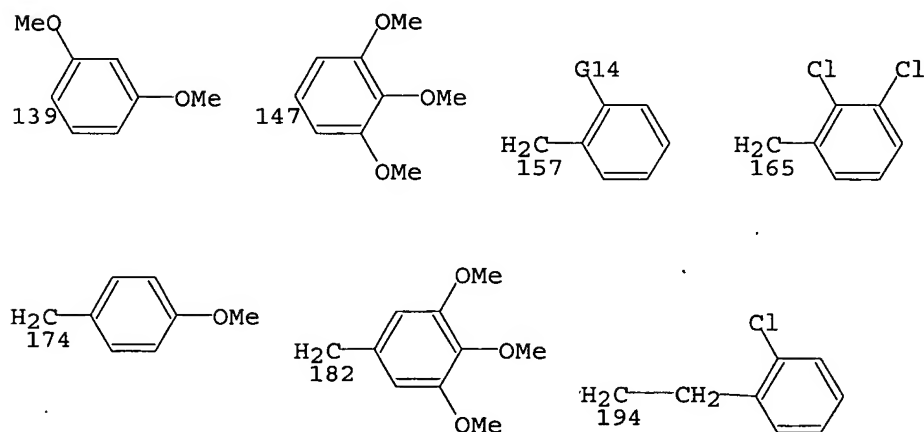
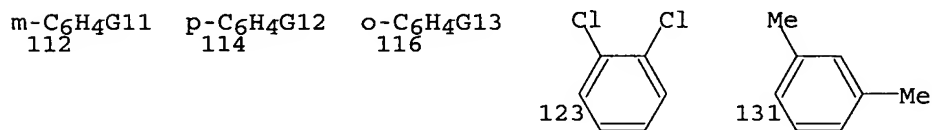
- G3 = H / Ph (opt. substd.) / cycloalkyl <containing 3-6 C> (opt. substd. by 1 or more G10) / alkyl <containing 1-10 C> (opt. substd. by 1 or more G4) / alkenyl <containing 2-10 C> (opt. substd. by 1 or more G4) / alkynyl <containing 2-10 C> (opt. substd. by 1 or more G4) / (Examples: 29 / 31 / 33 / 40 / 48 / 56 / 64 / 74 / 82 / 91 / 99 / 111)

m-C<sub>6</sub>H<sub>4</sub>G11    p-C<sub>6</sub>H<sub>4</sub>G12    o-C<sub>6</sub>H<sub>4</sub>G13

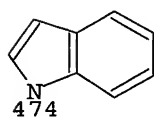
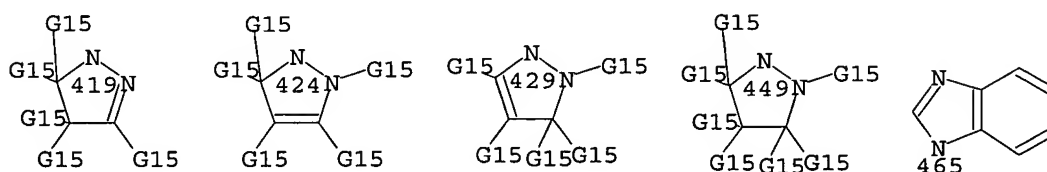
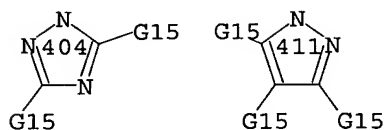
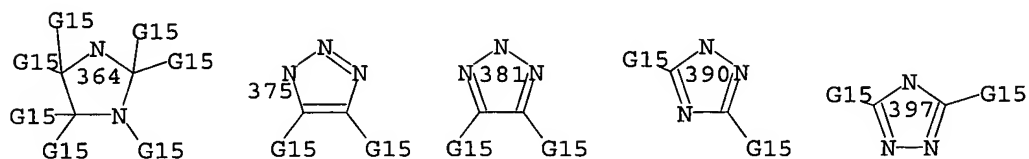
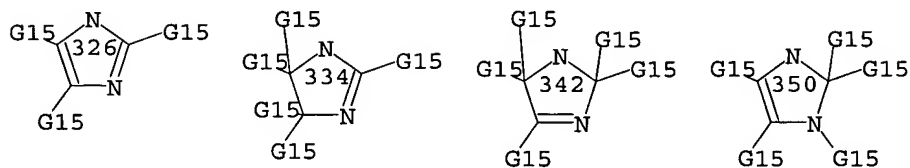
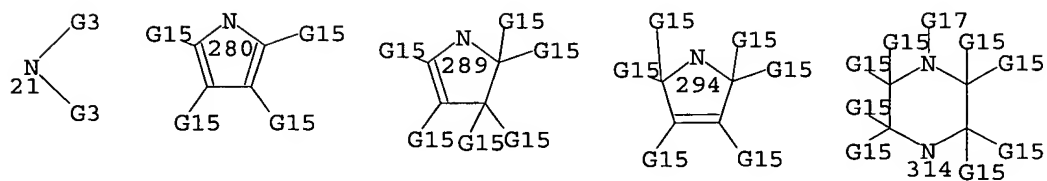




G4 = halo / OH / NO<sub>2</sub> / Ph (opt. substd.) /  
 NH<sub>2</sub> (opt. substd.) / alkoxy <containing 1-4 C> /  
 (Examples: 112 / 114 / 116 / 123 / 131 / 139 / 147 / 157 /  
 165 / 174 / 182 / 194)



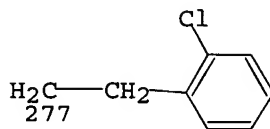
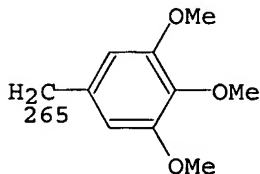
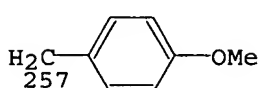
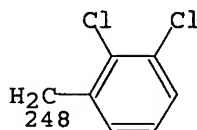
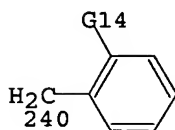
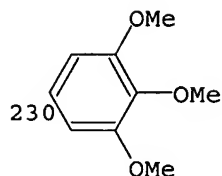
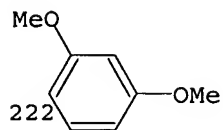
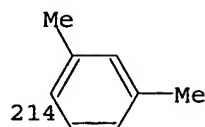
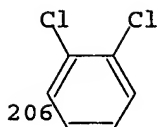
G5 = 21 / heterocycle <containing 1 or more heteroatoms,  
 1 or more N, zero or more O, zero or more S (no other  
 heteroatoms), attached through 1 or more N, 5-,  
 6- or 7-membered rings only> (opt. substd. by 1 or more G6) /  
 (Examples: 280 / 289 / 294 / pyrrolidino (opt. substd. by 1  
 or more G16) / piperidino (opt. substd. by 1 or more G16) /  
 314 / morpholino (opt. substd. by 1 or more G16) /  
 thiomorpholino (opt. substd. by 1 or more G16) / 326 / 334 /  
 342 / 350 / 364 / 375 / 381 / 390 / 397 / 404 / 411 / 419 /  
 424 / 429 / 449 / 465 / 474)



G6 = alkyl <containing 1-4 C> / Me

G7 = Ph (opt. substd. by 1 or more G8) / (Examples: 195 / 197 / 199 / 206 / 214 / 222 / 230 / 240 / 248 / 257 / 265 / 277)

m-C<sub>6</sub>H<sub>4</sub>G11 195    p-C<sub>6</sub>H<sub>4</sub>G12 197    o-C<sub>6</sub>H<sub>4</sub>G13 199

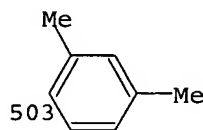
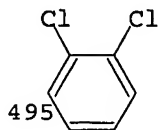


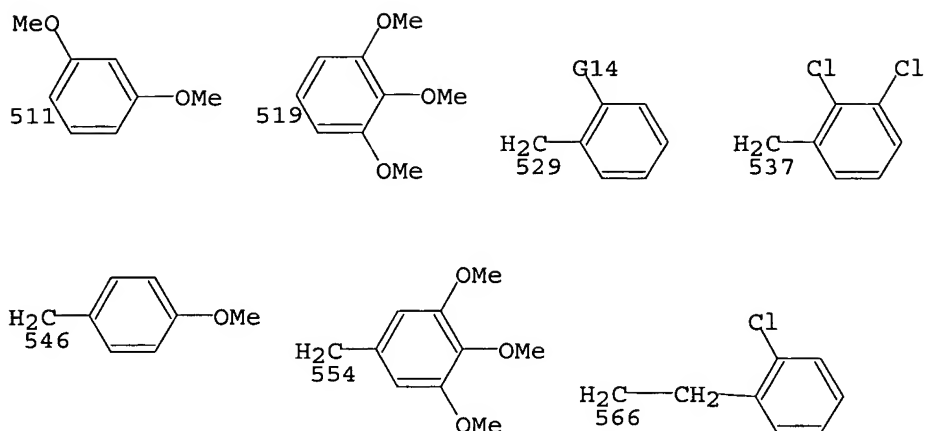
- G8 = R / halo / NO<sub>2</sub> / CF<sub>3</sub>  
 G9 = H / OH / alkyl <containing 1-4 C> /  
 (opt. substd. by 1 or more G18) /  
 Me (opt. substd. by 1 or more G18)  
 G10 = R / (Examples: alkyl <containing 1-4 C> / OH / halo)  
 G11 = Cl / Br / F / Et / CF<sub>3</sub> / OEt  
 G12 = Cl / Br / F / Me / Pr-n / Pr-i / Bu-n / Bu-t /  
 Bu-i / pentyl / CF<sub>3</sub> / OMe / OBu-n  
 G13 = Cl / Br / Me / CF<sub>3</sub> / OMe / OPr-n  
 G14 = Cl / Me / CF<sub>3</sub>  
 G15 = H / alkyl <containing 1-4 C> / Me  
 G16 = alkyl <containing 1-4 C> / Me  
 G17 = H / alkyl <containing 1-4 C> / Me / Et / Pr-n /  
**CH<sub>2</sub>Ph**  
 G18 = OH / halo  
 G19 = H / alkyl <containing 1-4 C>  
 G20 = N / CH  
 G21 = alkylene <containing 1-8 C>  
 G22 = 16 / 482

G2—G5 16 477    G23—G24 482

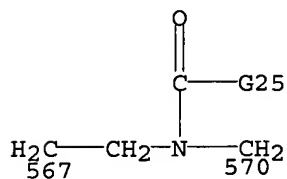
- G23 = bond / alkylene <containing 1-8 C>  
 G24 = Ph (opt. substd.) / CO<sub>2</sub>H /  
 alkoxycarbonyl <containing 1-4 C> / (Examples: 484 / 486 /  
 488 / 495 / 503 / 511 / 519 / 529 / 537 / 546 / 554 / 566)

m-C<sub>6</sub>H<sub>4</sub>G11 484    p-C<sub>6</sub>H<sub>4</sub>G12 486    o-C<sub>6</sub>H<sub>4</sub>G13 488





G25 = alkyl <containing 1-4 C> / cyclopropyl  
 G19+G22= 567-8 570-9



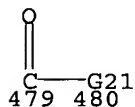
Patent location: disclosure

#### MSTR 1D

~~G22-G25-G7~~  
 578 579 640

G1 = H / alkyl <containing 1-4 C>  
 (opt. substd. by 1 or more G18) /  
 Me (opt. substd. by 1 or more G18) / cyclopropyl /  
 cyclobutyl / cyclopentyl / cyclohexyl / halo / Cl / Br

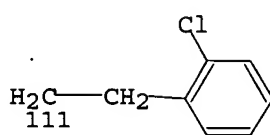
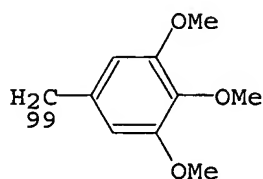
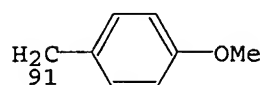
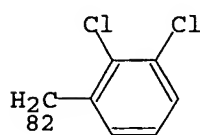
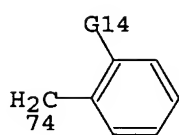
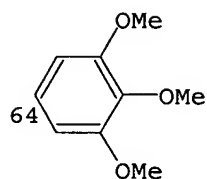
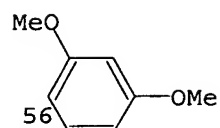
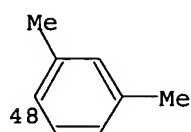
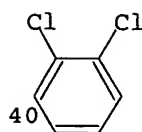
G2 = alkylene <containing 1-8 C> / C(O) /  
 479-477 480-579



G3 = H / Ph (opt. substd.) /  
 cycloalkyl <containing 3-6 C> (opt. substd. by 1 or more G10)  
 / alkyl <containing 1-10 C> (opt. substd. by 1 or more G4) /  
 alkenyl <containing 2-10 C> (opt. substd. by 1 or more G4) /  
 alkynyl <containing 2-10 C> (opt. substd. by 1 or more G4) /  
 (Examples: 29 / 31 / 33 / 40 / 48 / 56 / 64 / 74 / 82 / 91 /  
 99 / 111)

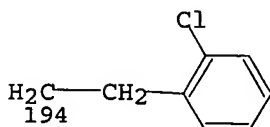
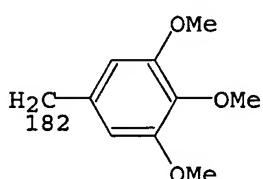
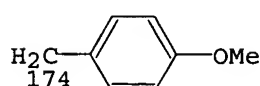
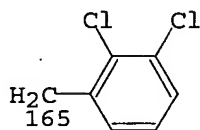
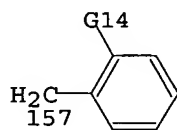
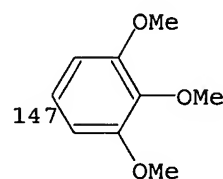
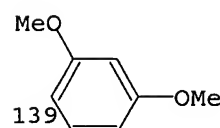
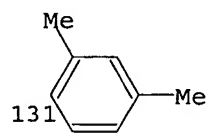
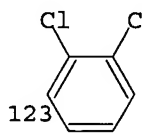


m-C<sub>6</sub>H<sub>4</sub>G11 p-C<sub>6</sub>H<sub>4</sub>G12 o-C<sub>6</sub>H<sub>4</sub>G13



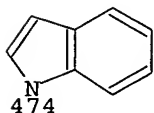
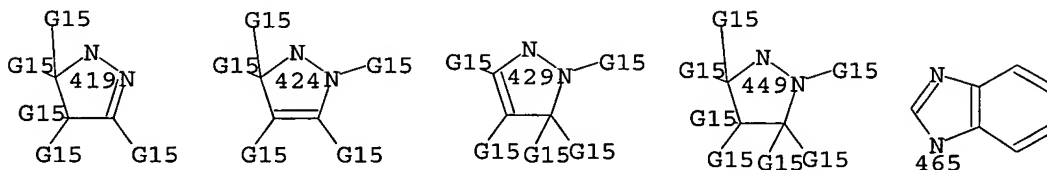
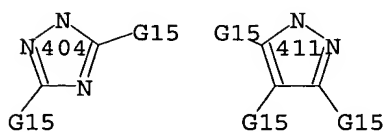
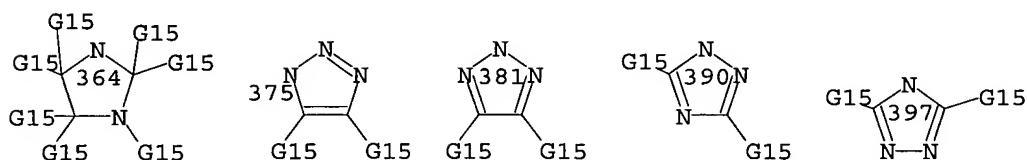
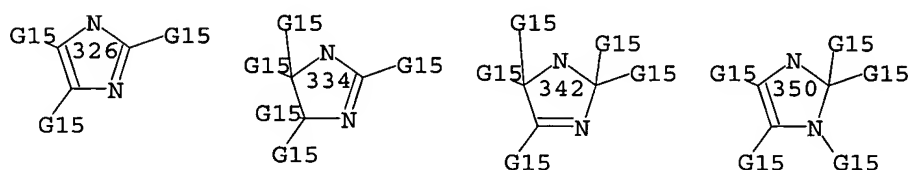
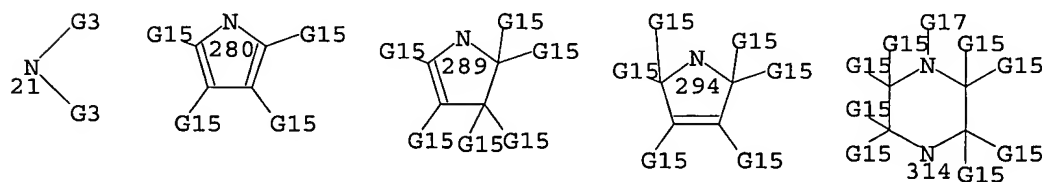
G4 = halo / OH / NO<sub>2</sub> / Ph (opt. substd.) /  
NH<sub>2</sub> (opt. substd.) / alkoxy <containing 1-4 C> /  
(Examples: 112 / 114 / 116 / 123 / 131 / 139 / 147 / 157 /  
165 / 174 / 182 / 194)

m-C<sub>6</sub>H<sub>4</sub>G11 p-C<sub>6</sub>H<sub>4</sub>G12 o-C<sub>6</sub>H<sub>4</sub>G13



G5 = 21 / heterocycle <containing 1 or more heteroatoms,  
1 or more N, zero or more O, zero or more S (no other  
heteroatoms), attached through 1 or more N, 5-,

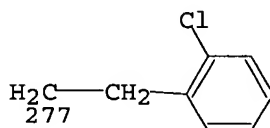
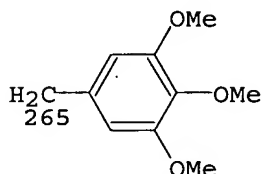
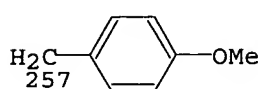
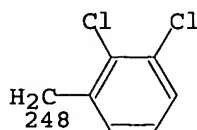
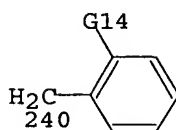
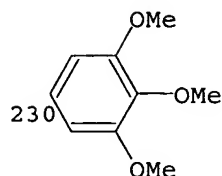
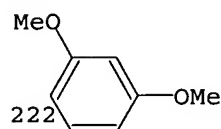
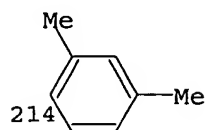
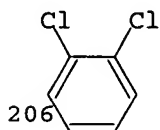
6- or 7-membered rings only> (opt. substd. by 1 or more G6) /  
 (Examples: 280 / 289 / 294 / pyrrolidino (opt. substd. by 1  
 or more G16) / piperidino (opt. substd. by 1 or more G16) /  
 314 / morpholino (opt. substd. by 1 or more G16) /  
 thiomorpholino (opt. substd. by 1 or more G16) / 326 / 334 /  
 342 / 350 / 364 / 375 / 381 / 390 / 397 / 404 / 411 / 419 /  
 424 / 429 / 449 / 465 / 474)



G6 = alkyl <containing 1-4 C> / Me

G7 = Ph (opt. substd. by 1 or more G8) / (Examples: 195 / 197 / 199 / 206 / 214 / 222 / 230 / 240 / 248 / 257 / 265 / 277)

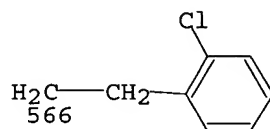
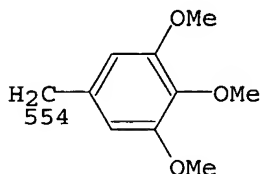
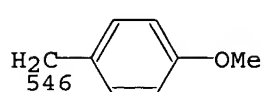
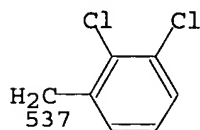
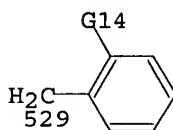
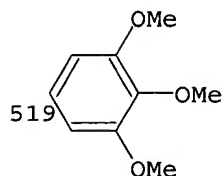
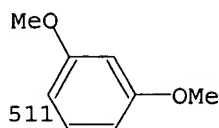
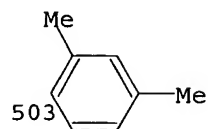
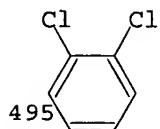
m-C<sub>6</sub>H<sub>4</sub>G11 195    p-C<sub>6</sub>H<sub>4</sub>G12 197    o-C<sub>6</sub>H<sub>4</sub>G13 199



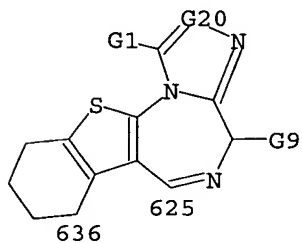
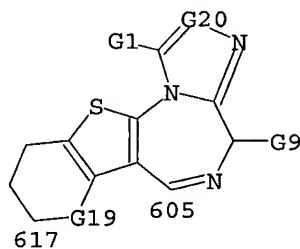
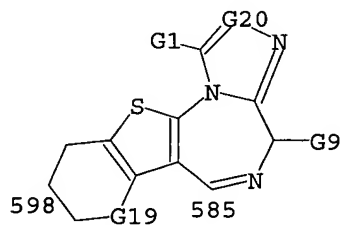
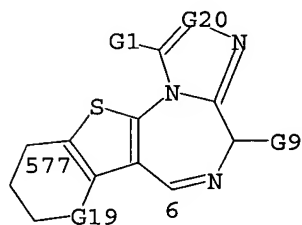
G8 = R / halo / NO<sub>2</sub> / CF<sub>3</sub>  
 G9 = H / OH / alkyl <containing 1-4 C> (opt. substd. by 1 or more G18) / Me (opt. substd. by 1 or more G18)  
 G10 = R / (Examples: alkyl <containing 1-4 C> / OH / halo)  
 G11 = Cl / Br / F / Et / CF<sub>3</sub> / OEt  
 G12 = Cl / Br / F / Me / Pr-n / Pr-i / Bu-n / Bu-t / Bu-i / pentyl / CF<sub>3</sub> / OMe / OBu-n  
 G13 = Cl / Br / Me / CF<sub>3</sub> / OMe / OPr-n  
 G14 = Cl / Me / CF<sub>3</sub>  
 G15 = H / alkyl <containing 1-4 C> / Me  
 G16 = alkyl <containing 1-4 C> / Me  
 G17 = H / alkyl <containing 1-4 C> / Me / Et / Pr-n / CH<sub>2</sub>Ph  
 G18 = OH / halo  
 G19 = bond / CH<sub>2</sub>  
 G20 = N / CH  
 G21 = alkylene <containing 1-8 C>  
 G22 = 16 / 482

G2—G5 16 477    G23—G24 482

G23 = bond / alkylene <containing 1-8 C>  
 G24 = Ph (opt. substd.) / CO<sub>2</sub>H / alkoxy carbonyl <containing 1-4 C> / (Examples: 484 / 486 / 488 / 495 / 503 / 511 / 519 / 529 / 537 / 546 / 554 / 566)

m-C<sub>6</sub>H<sub>4</sub>G11  
484p-C<sub>6</sub>H<sub>4</sub>G12  
486o-C<sub>6</sub>H<sub>4</sub>G13  
488

G25 = 577-578 6-640 / 598-578 585-640 /  
617-578 605-640 / 636-578 625-640



Patent location:

disclosure

L29 ANSWER 36 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 119:203434 MARPAT

TITLE: Preparation of N-acyl-1-[(piperazinosulfonyl)methyl]bi  
cycloheptyl(alkyl)amines and analogs as oxytocin  
antagonists

INVENTOR(S): Bock, Mark G.; Erb, Jill M.; Hobbs, Doug W.; Hoffman, James B.; Perlow, Debra S.; Pawluczyk, Joseph M.; Veber, Daniel F.; Williams, Peter D.

PATENT ASSIGNEE(S): Merck and Co., Inc., USA

SOURCE: Eur. Pat. Appl., 142 pp.  
CODEN: EPXXDW

DOCUMENT TYPE: Patent

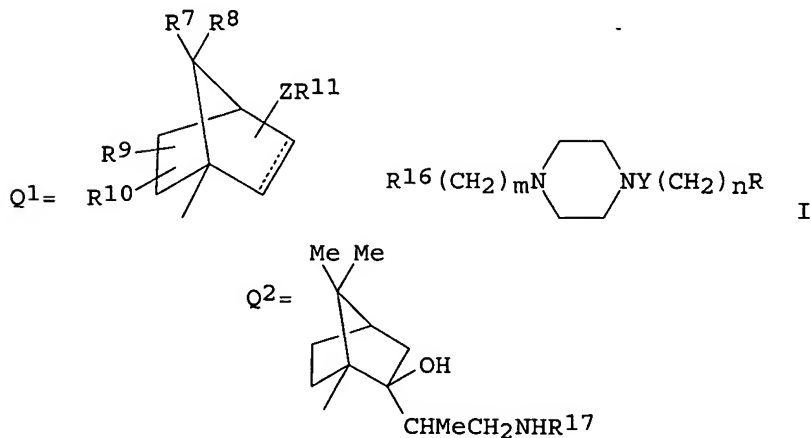
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

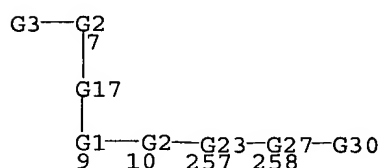
| PATENT NO.                                                        | KIND | DATE     | APPLICATION NO. | DATE     |
|-------------------------------------------------------------------|------|----------|-----------------|----------|
| EP 532097                                                         | A1   | 19930317 | EP 1992-202689  | 19920905 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE |      |          |                 |          |
| WO 9306092                                                        | A1   | 19930401 | WO 1992-US7214  | 19920826 |
| W: BG, CS, FI, HU, NO, PL, RO, RU                                 |      |          |                 |          |
| HU 67287                                                          | A2   | 19950328 | HU 1994-738     | 19920826 |
| CA 2077922                                                        | AA   | 19930314 | CA 1992-2077922 | 19920910 |
| AU 9223550                                                        | A1   | 19930325 | AU 1992-23550   | 19920911 |
| AU 653059                                                         | B2   | 19940915 |                 |          |
| CN 1070399                                                        | A    | 19930331 | CN 1992-110672  | 19920911 |
| ZA 9206936                                                        | A    | 19930428 | ZA 1992-6936    | 19920911 |
| JP 07242625                                                       | A2   | 19950919 | JP 1992-288091  | 19920914 |
| JP 2523426                                                        | B2   | 19960807 |                 |          |
| BR 9301159                                                        | A    | 19941018 | BR 1993-1159    | 19930312 |
| LT 3592                                                           | B    | 19951227 | LT 1993-494     | 19930427 |
| FI 9401136                                                        | A    | 19940310 | FI 1994-1136    | 19940310 |
| NO 9400882                                                        | A    | 19940311 | NO 1994-882     | 19940311 |
| US 5648352                                                        | A    | 19970715 | US 1995-451779  | 19950526 |
| PRIORITY APPLN. INFO.:                                            |      |          | US 1991-759242  | 19910913 |
|                                                                   |      |          | US 1992-917549  | 19920721 |
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|                                                                   |      |          | WO 1992-US7214  | 19920826 |
|                                                                   |      |          | US 1992-993999  | 19921221 |
|                                                                   |      |          | US 1992-995317  | 19921222 |
|                                                                   |      |          | US 1993-40332   | 19930330 |
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GI

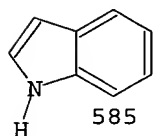
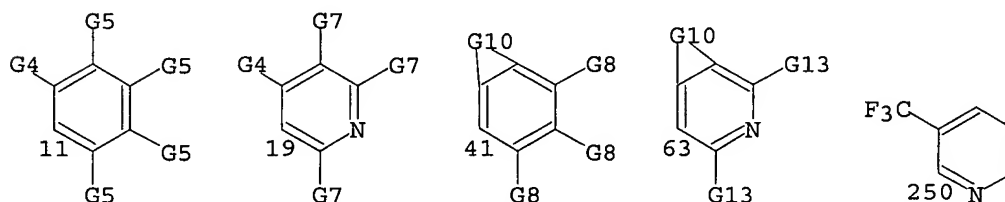


AB Title compds. I [R = bicycloalk(en)yl group Q1; R5, R6 = H, alkyl, phenylalkyl, etc.; R1, R8 = H, alkyl; R9, R10 = H, OH, halo, Me, etc.; R11 = H, NR12COR13, CONR14R15; R12 = H, alkoxy, alkyl, alkoxy carbonyl, etc.; R13 = H, alkoxy, CO2H, alkoxy carbonyl(amino), etc.; R14, R15 = H, alkyl, heterocyclyl, etc.; R16 = (substituted)Ph, -3-pyridyl; Y = CO, SO2; Z = bond, (carbonyl)alkylene; m, n = 0 or 1] were prepared. Thus, 1-(O-tolyl)piperazine was condensed with (+)-10-camphorsulfonyl chloride and the product condensed with EtCN to give, after reduction, I (R = bicycloheptyl group Q2, R5 = R = H, R16 = 2-MeC6H4, Y = SO2, m = 0, n = 1) (II; R17 = H) which was condensed with 4(5)-imidazoleacetic acid to give II [R17 = 4(5)-imidazoleacetyl]. The latter had an inhibiting concn.50 of 8 nM against oxytocin binding at rat uterus membrane preparation in vitro.

## MSTR 1A



G1 = C(O) / SO2  
 G2 = (0-1) CH2  
 G3 = 11 / 19 / 41 / 63 / (Examples: 585 / 250)



G4 = H / alkyl <containing 1-10 C>  
 G5 = 2 or more H / halo / 159 /  
 alkyl <containing 1-10 C> (opt. substd. by 1 or more G6)

G22-G21  
 159

G6 = OH / alkoxy <containing 1-10 C> /  
 alkylsulfonyl <containing 1-10 C> / NH2 /  
 alkylamino <containing 1-10 C> /  
 dialkylamino <each alkyl containing 1-10 C>  
 G7 = 2 or more H / halo / 166 /

alkyl <containing 1-10 C> (opt. substd. by 1 or more G6)

G22-G21  
166

G8 = 1 or more H / halo / 168 /  
alkyl <containing 1-10 C> (opt. substd. by 1 or more G6)

G22-G21  
168

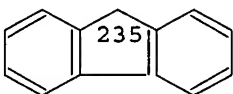
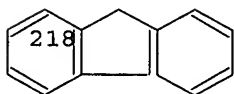
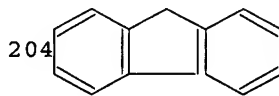
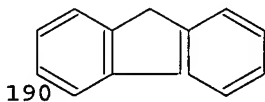
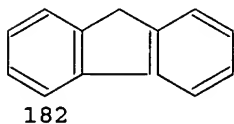
G10 = (3-4) CH<sub>2</sub>  
G12 = H / alkyl <containing 1-10 C>  
G13 = H / halo / 170 / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more G6)

G22-G21  
170

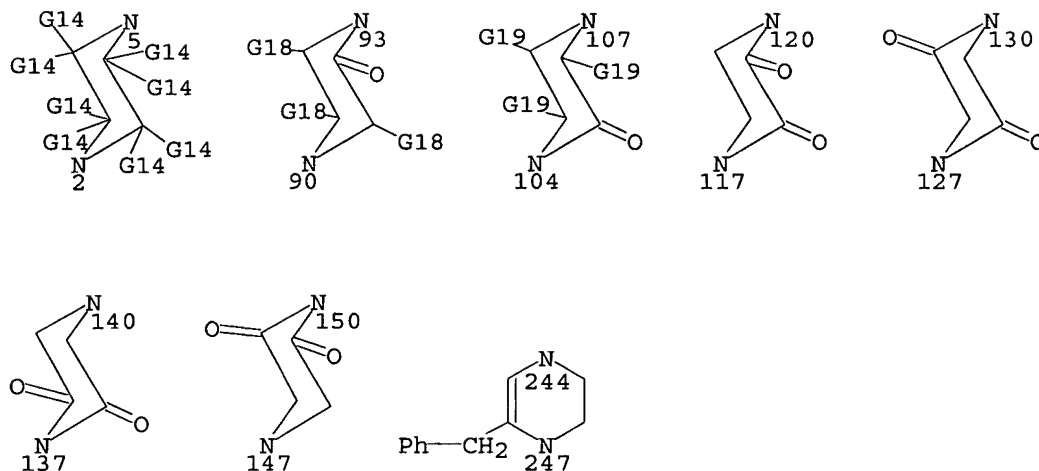
G14 = 6 or more H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more G15) /  
alkyl <containing 1-10 C> (substd. by Ph)  
G15 = NH<sub>2</sub> / OH / alkoxy <containing 1-10 C> / 86 /  
alkylamino <containing 1-10 C> /  
dialkylamino <each alkyl containing 1-10 C>

O<sub>2</sub>S—G16  
86

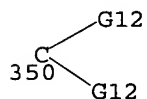
G16 = alkyl <containing 1-10 C> / Ph / naphthyl / 182 /  
190 / 204 / 218 / 235



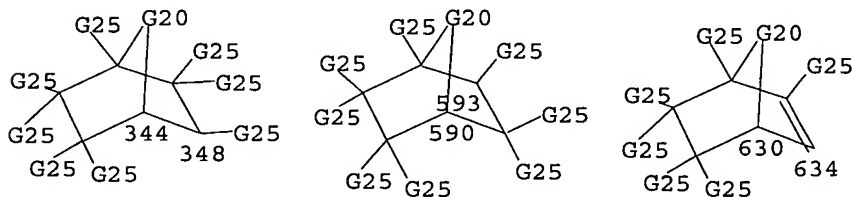
G17 = 5-7 2-9 / 93-7 90-9 / 107-7 104-9 /  
120-7 117-9 / 130-7 127-9 / 140-7 137-9 / 150-7 147-9 /  
(Example: 244-7 247-9 )



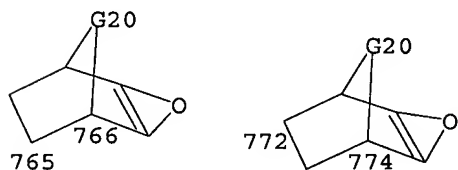
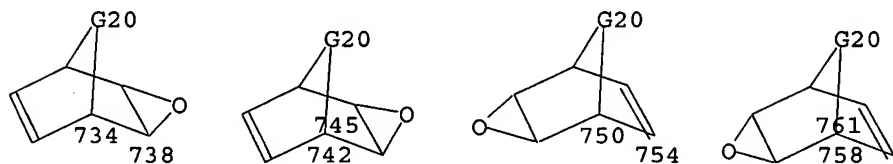
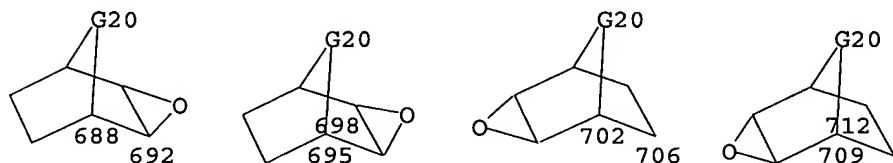
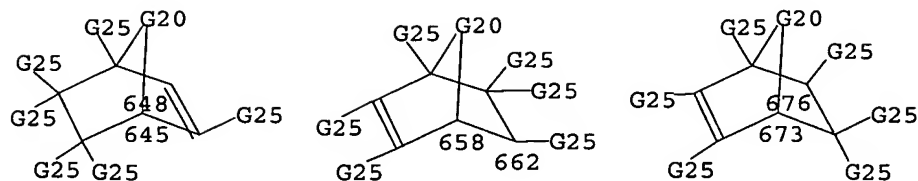
- G18 = 2 or more H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more G15) /  
alkyl <containing 1-10 C> (substd. by Ph)
- G19 = 2 or more H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more G15) /  
alkyl <containing 1-10 C> (substd. by Ph)
- G20 = 350 / cycloalkylene <containing 3-8 C>  
(opt. substd. by G24)



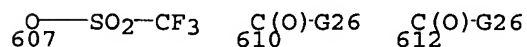
- G21 = alkyl <containing 1-10 C>
- G22 = O / SO2
- G23 = 344-10 348-258 / 590-10 593-258 /  
630-10 634-258 / 645-10 648-258 / 658-10 662-258 /  
673-10 676-258 / 688-10 692-258 / 695-10 698-258 /  
702-10 706-258 / 709-10 712-258 / 734-10 738-258 /  
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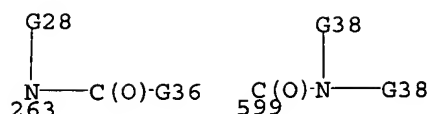




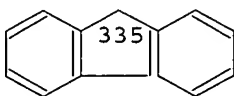
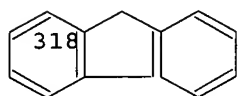
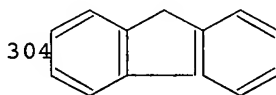
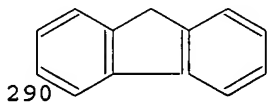
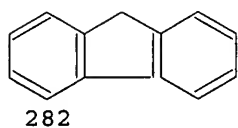
G24 = OH / alkyl <containing 1-10 C> (substd. by OH)  
 G25 = H / OH / halo / Me / CO<sub>2</sub>H /  
 alkoxy carbonyl <containing 1-10 C> /  
 alkyl carbonyloxy <containing 1-10 C> /  
 alkoxy <containing 1-10 C> (substd. by alkoxy carbonyl  
 <containing 1-10 C>) / 607 / NH<sub>2</sub> /  
 alkyl amino <containing 1-10 C> (opt. substd. by 610) /  
 dialkyl amino <each alkyl containing 1-10 C>  
 (opt. substd. by 612)



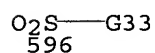
G26 = OH / alkoxy <containing 1-10 C>  
 G27 = bond / alkylene <containing 1-10 C>  
 (opt. substd. by CO<sub>2</sub>H)  
 G28 = H / alkoxy <containing 1-10 C> /  
 alkyl <containing 1-10 C> (opt. substd. by 1 or more G35) /  
 alkoxy carbonyl <containing 1-10 C> /  
 alkoxy carbonyl amino <containing 1-10 C>  
 G30 = H / 263 / 599



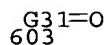
- G31 = heterocycle <containing 5-8 atoms, 1-4 heteroatoms, 1-4 N (no other heteroatoms), 5- to 8-membered monocyclic ring> (opt. substd.) / heterocycle <containing 5-6 atoms, 1-2 heteroatoms, 0-2 O, 0-2 S (no other heteroatoms), 5- to 6-membered monocyclic ring> (opt. substd.) / heterocycle <containing 6 atoms, 2 heteroatoms, 0-1 N, 0-1 O, 0-1 S (no other heteroatoms), 6-membered monocyclic ring> (opt. substd.)
- G33 = Ph / naphthyl / 282 / 290 / 304 / 318 / 335



- G35 = CO<sub>2</sub>H / OH / alkoxy <containing 1-10 C> / alkoxycarbonyl <containing 1-10 C> / alkylsulfonyl <containing 1-10 C> / 596



- G36 = H / alkoxy <containing 1-10 C> (opt. substd. by 1 or more G33) / CO<sub>2</sub>H / alkoxycarbonyl <containing 1-10 C> / alkoxycarbonylamino <containing 1-10 C> / cycloalkyl <containing 3-8 C> (opt. substd. by CO<sub>2</sub>H) / Ph (opt. substd. by 1 or more G37) / NH<sub>2</sub> / alkylamino <containing 1-10 C> (opt. substd. by G39) / dialkylamino <each alkyl containing 1-10 C> (opt. substd. by G39) / heterocycle <containing 5-8 atoms, 1-4 heteroatoms, 1-4 N (no other heteroatoms), 5- to 8-membered monocyclic ring> (opt. substd.) / heterocycle <containing 5-6 atoms, 1-2 heteroatoms, 0-2 O, 0-2 S (no other heteroatoms), 5- to 6-membered monocyclic ring> (opt. substd.) / heterocycle <containing 6 atoms, 2 heteroatoms, 0-1 N, 0-1 O, 0-1 S (no other heteroatoms), 6-membered monocyclic ring> (opt. substd.) / 603 / alkyl <containing 1-10 C> (opt. substd.)

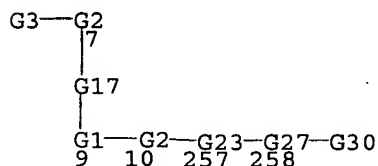


- G37 = CO<sub>2</sub>H / alkyl <containing 1-10 C> (substd. by CO<sub>2</sub>H) / SO<sub>3</sub>H
- G38 = H / alkyl <containing 1-10 C> (opt. substd.) / heterocycle <containing 5-8 atoms, 1-4 heteroatoms, 1-4 N (no other heteroatoms), 5- to 8-membered monocyclic ring> (opt. substd.) / heterocycle <containing 5-6 atoms, 1-2 heteroatoms, 0-2 O, 0-2 S (no other heteroatoms), 5- to 6-membered monocyclic ring> (opt. substd.) / heterocycle <containing 6 atoms, 2 heteroatoms, 0-1 N, 0-1 O, 0-1 S (no other heteroatoms), 6-membered monocyclic ring> (opt. substd.) / 605

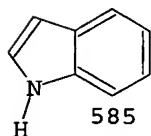
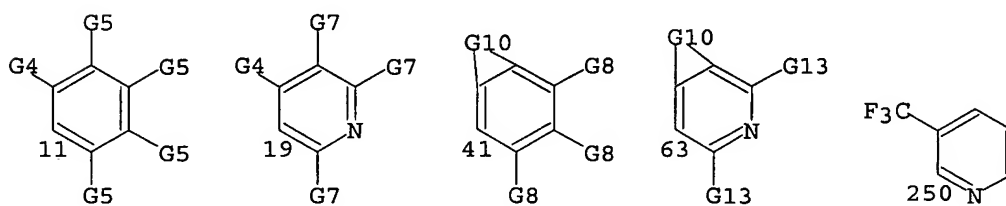
G31=O  
605

- G39 = CO<sub>2</sub>H / alkylsulfonyl <containing 1-10 C> / heterocycle <containing 1-2 heteroatoms, 1-2 N (no other heteroatoms), 5-membered monocyclic ring>
- Derivative: or pharmaceutically acceptable salts
- Patent location: claim 1

## MSTR 1C



- G1 = C(O) / SO<sub>2</sub>
- G2 = (0-1) CH<sub>2</sub>
- G3 = 11 / 19 / 41 / 63 / (Examples: 585 / 250)



- G4 = H / alkyl <containing 1-10 C>
- G5 = 2 or more H / halo / 159 / alkyl <containing 1-10 C> (opt. substd. by 1 or more G6)

G22-G21  
159

- G6 = OH / alkoxy <containing 1-10 C> /  
alkylsulfonyl <containing 1-10 C> / NH2 /  
alkylamino <containing 1-10 C> /  
dialkylamino <each alkyl containing 1-10 C>  
G7 = 2 or more H / halo / 166 /  
alkyl <containing 1-10 C> (opt. substd. by 1 or more G6)

G22-G21  
166

- G8 = 1 or more H / halo / 168 /  
alkyl <containing 1-10 C> (opt. substd. by 1 or more G6)

G22-G21  
168

- G9 = O / 686

N—OH  
686

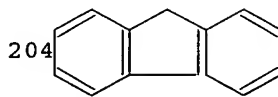
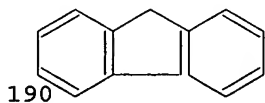
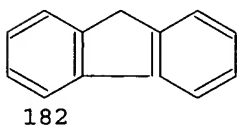
- G10 = (3-4) CH2  
G12 = H / alkyl <containing 1-10 C>  
G13 = H / halo / 170 / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more G6)

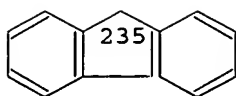
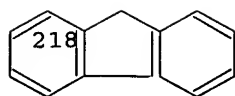
G22-G21  
170

- G14 = 6 or more H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more G15) /  
alkyl <containing 1-10 C> (substd. by Ph)  
G15 = NH2 / OH / alkoxy <containing 1-10 C> / 86 /  
alkylamino <containing 1-10 C> /  
dialkylamino <each alkyl containing 1-10 C>

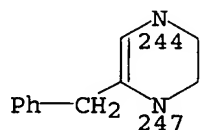
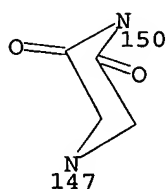
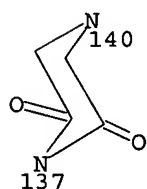
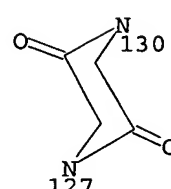
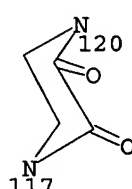
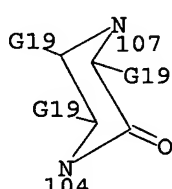
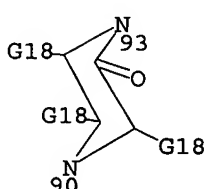
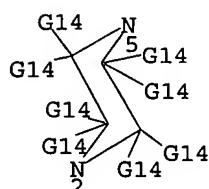
O<sub>2</sub>S—G16  
86

- G16 = alkyl <containing 1-10 C> / Ph / naphthyl / 182 /  
190 / 204 / 218 / 235

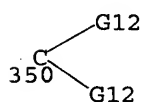




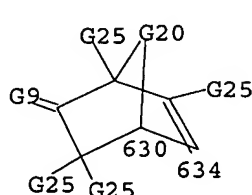
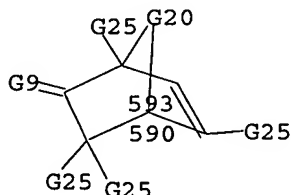
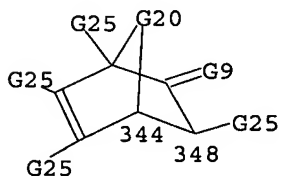
G17 = 5-7 2-9 / 93-7 90-9 / 107-7 104-9 /  
120-7 117-9 / 130-7 127-9 / 140-7 137-9 / 150-7 147-9 /  
(Example: 244-7 247-9 )

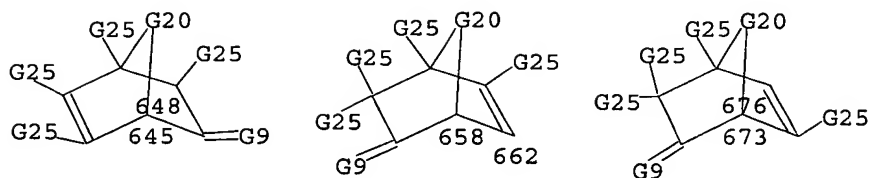


G18 = 2 or more H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more G15) /  
alkyl <containing 1-10 C> (substd. by Ph)  
G19 = 2 or more H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more G15) /  
alkyl <containing 1-10 C> (substd. by Ph)  
G20 = 350 / cycloalkylene <containing 3-8 C>  
(opt. substd. by G24)

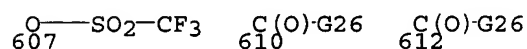


G21 = alkyl <containing 1-10 C>  
G22 = O / SO2  
G23 = 344-10 348-258 / 590-10 593-258 /  
630-10 634-258 / 645-10 648-258 / 658-10 662-258 /  
673-10 676-258

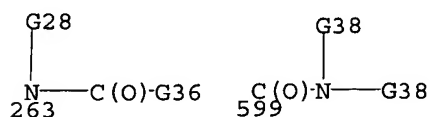




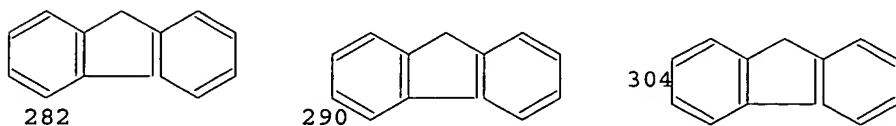
G24 = OH / alkyl <containing 1-10 C> (substd. by OH)  
 G25 = H / OH / halo / Me / CO<sub>2</sub>H /  
 alkoxy carbonyl <containing 1-10 C> /  
 alkyl carbonyloxy <containing 1-10 C> /  
 alkoxy <containing 1-10 C> (substd. by alkoxy carbonyl  
 <containing 1-10 C>) / 607 / NH<sub>2</sub> /  
 alkylamino <containing 1-10 C> (opt. substd. by 610) /  
 dialkylamino <each alkyl containing 1-10 C>  
 (opt. substd. by 612)

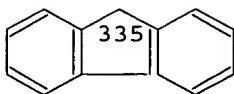
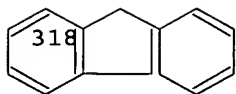


G26 = OH / alkoxy <containing 1-10 C>  
 G27 = bond / alkylene <containing 1-10 C>  
 (opt. substd. by CO<sub>2</sub>H)  
 G28 = H / alkoxy <containing 1-10 C> /  
 alkyl <containing 1-10 C> (opt. substd. by 1 or more G35) /  
 alkoxy carbonyl <containing 1-10 C> /  
 alkoxy carbonylamino <containing 1-10 C>  
 G30 = H / 263 / 599



G31 = heterocycle <containing 5-8 atoms, 1-4 heteroatoms,  
 1-4 N (no other heteroatoms), 5- to 8-membered monocyclic  
 ring> (opt. substd.) / heterocycle <containing 5-6 atoms,  
 1-2 heteroatoms, 0-2 O, 0-2 S (no other heteroatoms),  
 5- to 6-membered monocyclic ring> (opt. substd.) /  
 heterocycle <containing 6 atoms, 2 heteroatoms, 0-1 N,  
 0-1 O, 0-1 S (no other heteroatoms),  
 6-membered monocyclic ring> (opt. substd.)  
 G33 = Ph / naphthyl / 282 / 290 / 304 / 318 / 335





G35 = CO<sub>2</sub>H / OH / alkoxy <containing 1-10 C> /  
alkoxycarbonyl <containing 1-10 C> /  
alkylsulfonyl <containing 1-10 C> / 596

O<sub>2</sub>S—G33  
596

G36 = H / alkoxy <containing 1-10 C>  
(opt. substd. by 1 or more G33) / CO<sub>2</sub>H /  
alkoxycarbonyl <containing 1-10 C> /  
alkoxycarbonylamino <containing 1-10 C> /  
cycloalkyl <containing 3-8 C> (opt. substd. by CO<sub>2</sub>H) /  
Ph (opt. substd. by 1 or more G37) / NH<sub>2</sub> /  
alkylamino <containing 1-10 C> (opt. substd. by G39) /  
dialkylamino <each alkyl containing 1-10 C>  
(opt. substd. by G39) / heterocycle <containing 5-8 atoms,  
1-4 heteroatoms, 1-4 N (no other heteroatoms),  
5- to 8-membered monocyclic ring> (opt. substd.) /  
heterocycle <containing 5-6 atoms, 1-2 heteroatoms, 0-2 O,  
0-2 S (no other heteroatoms), 5- to 6-membered monocyclic  
ring> (opt. substd.) / heterocycle <containing 6 atoms,  
2 heteroatoms, 0-1 N, 0-1 O, 0-1 S (no other heteroatoms),  
6-membered monocyclic ring> (opt. substd.) / 603 /  
alkyl <containing 1-10 C> (opt. substd.)

G31=O  
603

G37 = CO<sub>2</sub>H / alkyl <containing 1-10 C> (substd. by CO<sub>2</sub>H) /  
SO<sub>3</sub>H

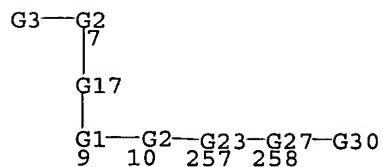
G38 = H / alkyl <containing 1-10 C> (opt. substd.) /  
heterocycle <containing 5-8 atoms, 1-4 heteroatoms,  
1-4 N (no other heteroatoms), 5- to 8-membered monocyclic  
ring> (opt. substd.) / heterocycle <containing 5-6 atoms,  
1-2 heteroatoms, 0-2 O, 0-2 S (no other heteroatoms),  
5- to 6-membered monocyclic ring> (opt. substd.) /  
heterocycle <containing 6 atoms, 2 heteroatoms, 0-1 N,  
0-1 O, 0-1 S (no other heteroatoms),  
6-membered monocyclic ring> (opt. substd.) / 605

G31=O  
605

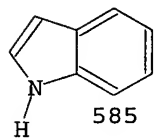
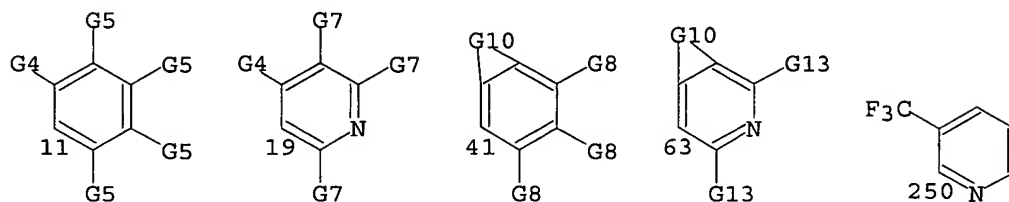
G39 = CO<sub>2</sub>H / alkylsulfonyl <containing 1-10 C> /  
heterocycle <containing 1-2 heteroatoms,  
1-2 N (no other heteroatoms), 5-membered monocyclic ring>

Derivative: or pharmaceutically acceptable salts  
Patent location: claim 1

## MSTR 1D



G1 = C(O) / SO<sub>2</sub>  
 G2 = (0-1) CH<sub>2</sub>  
 G3 = 11 / 19 / 41 / 63 / (Examples: 585 / 250)



G4 = H / alkyl <containing 1-10 C>  
 G5 = 2 or more H / halo / 159 /  
 alkyl <containing 1-10 C> (opt. substd. by 1 or more G6)

$\text{G22}-\text{G21}$   
 159

G6 = OH / alkoxy <containing 1-10 C> /  
 alkylsulfonyl <containing 1-10 C> / NH<sub>2</sub> /  
 alkylamino <containing 1-10 C> /  
 dialkylamino <each alkyl containing 1-10 C>  
 G7 = 2 or more H / halo / 166 /  
 alkyl <containing 1-10 C> (opt. substd. by 1 or more G6)

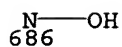
$\text{G22}-\text{G21}$   
 166

G8 = 1 or more H / halo / 168 /  
 alkyl <containing 1-10 C> (opt. substd. by 1 or more G6)

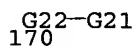
$\text{G22}-\text{G21}$   
 168

G9 = O / 686

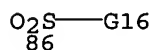




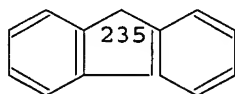
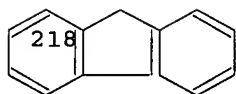
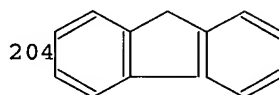
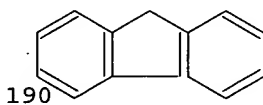
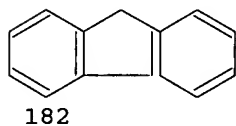
- G10 = (3-4) CH<sub>2</sub>  
 G12 = H / alkyl <containing 1-10 C>  
 G13 = H / halo / 170 / alkyl <containing 1-10 C>  
 (opt. substd. by 1 or more G6)



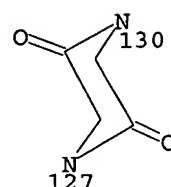
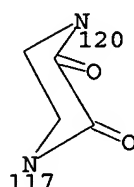
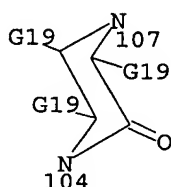
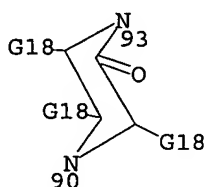
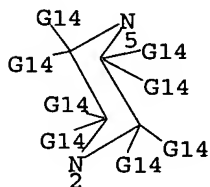
- G14 = 6 or more H / alkyl <containing 1-10 C>  
 (opt. substd. by 1 or more G15) /  
 alkyl <containing 1-10 C> (substd. by Ph)  
 G15 = NH<sub>2</sub> / OH / alkoxy <containing 1-10 C> / 86 /  
 alkylamino <containing 1-10 C> /  
 dialkylamino <each alkyl containing 1-10 C>

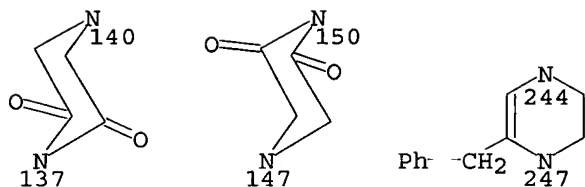


- G16 = alkyl <containing 1-10 C> / Ph / naphthyl / 182 /  
 190 / 204 / 218 / 235

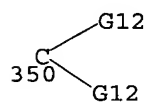


- G17 = 5-7 2-9 / 93-7 90-9 / 107-7 104-9 /  
 120-7 117-9 / 130-7 127-9 / 140-7 137-9 / 150-7 147-9 /  
 (Example: 244-7 247-9 )

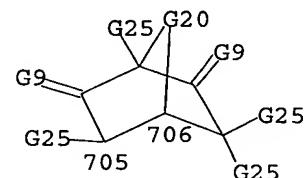
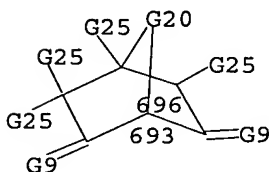
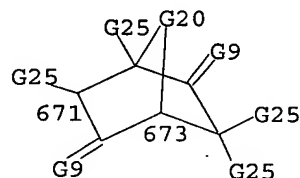
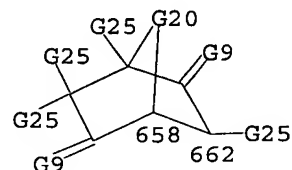
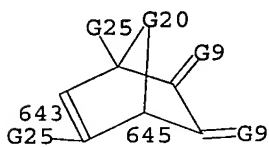
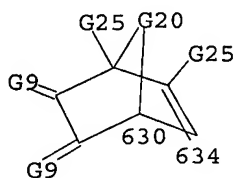
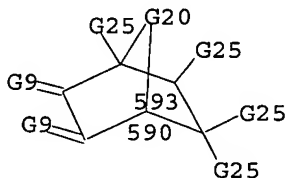
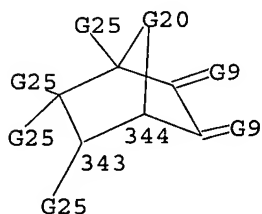




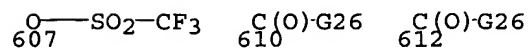
- G18 = 2 or more H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more G15) /  
alkyl <containing 1-10 C> (substd. by Ph)
- G19 = 2 or more H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more G15) /  
alkyl <containing 1-10 C> (substd. by Ph)
- G20 = 350 / cycloalkylene <containing 3-8 C>  
(opt. substd. by G24)



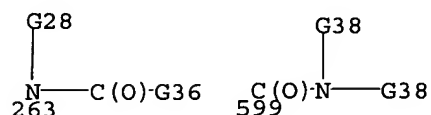
- G21 = alkyl <containing 1-10 C>
- G22 = O / SO<sub>2</sub>
- G23 = 344-10 343-258 / 590-10 593-258 /  
630-10 634-258 / 645-10 643-258 / 658-10 662-258 /  
673-10 671-258 / 693-10 696-258 / 706-10 705-258



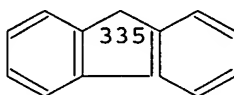
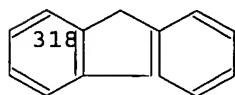
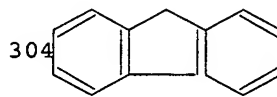
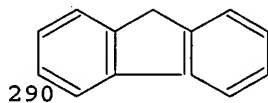
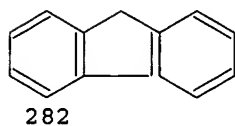
- G24 = OH / alkyl <containing 1-10 C> (substd. by OH)  
 G25 = H / OH / halo / Me / CO<sub>2</sub>H /  
 alkoxycarbonyl <containing 1-10 C> /  
 alkylcarbonyloxy <containing 1-10 C> /  
 alkoxy <containing 1-10 C> (substd. by alkoxycarbonyl  
 <containing 1-10 C>) / 607 / NH<sub>2</sub> /  
 alkylamino <containing 1-10 C> (opt. substd. by 610) /  
 dialkylamino <each alkyl containing 1-10 C>  
 (opt. substd. by 612)



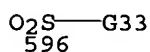
- G26 = OH / alkoxy <containing 1-10 C>  
 G27 = bond / alkylene <containing 1-10 C>  
 (opt. substd. by CO<sub>2</sub>H)  
 G28 = H / alkoxy <containing 1-10 C> /  
 alkyl <containing 1-10 C> (opt. substd. by 1 or more G35) /  
 alkoxycarbonyl <containing 1-10 C> /  
 alkoxycarbonylamino <containing 1-10 C>  
 G30 = H / 263 / 599



- G31 = heterocycle <containing 5-8 atoms, 1-4 heteroatoms,  
 1-4 N (no other heteroatoms), 5- to 8-membered monocyclic  
 ring> (opt. substd.) / heterocycle <containing 5-6 atoms,  
 1-2 heteroatoms, 0-2 O, 0-2 S (no other heteroatoms),  
 5- to 6-membered monocyclic ring> (opt. substd.) /  
 heterocycle <containing 6 atoms, 2 heteroatoms, 0-1 N,  
 0-1 O, 0-1 S (no other heteroatoms),  
 6-membered monocyclic ring> (opt. substd.)  
 G33 = Ph / naphthyl / 282 / 290 / 304 / 318 / 335



- G35 = CO<sub>2</sub>H / OH / alkoxy <containing 1-10 C> /  
 alkoxycarbonyl <containing 1-10 C> /  
 alkylsulfonyl <containing 1-10 C> / 596



G36 = H / alkoxy <containing 1-10 C>  
 (opt. substd. by 1 or more G33) / CO<sub>2</sub>H /  
 alkoxycarbonyl <containing 1-10 C> /  
 alkoxycarbonylamino <containing 1-10 C> /  
 cycloalkyl <containing 3-8 C> (opt. substd. by CO<sub>2</sub>H) /  
 Ph (opt. substd. by 1 or more G37) / NH<sub>2</sub> /  
 alkylamino <containing 1-10 C> (opt. substd. by G39) /  
 dialkylamino <each alkyl containing 1-10 C>  
 (opt. substd. by G39) / heterocycle <containing 5-8 atoms,  
 1-4 heteroatoms, 1-4 N (no other heteroatoms),  
 5- to 8-membered monocyclic ring> (opt. substd.) /  
 heterocycle <containing 5-6 atoms, 1-2 heteroatoms, 0-2 O,  
 0-2 S (no other heteroatoms), 5- to 6-membered monocyclic  
 ring> (opt. substd.) / heterocycle <containing 6 atoms,  
 2 heteroatoms, 0-1 N, 0-1 O, 0-1 S (no other heteroatoms),  
 6-membered monocyclic ring> (opt. substd.) / 603 /  
 alkyl <containing 1-10 C> (opt. substd.)

G31=O  
 603

G37 = CO<sub>2</sub>H / alkyl <containing 1-10 C> (substd. by CO<sub>2</sub>H) /  
 SO<sub>3</sub>H  
 G38 = H / alkyl <containing 1-10 C> (opt. substd.) /  
 heterocycle <containing 5-8 atoms, 1-4 heteroatoms,  
 1-4 N (no other heteroatoms), 5- to 8-membered monocyclic  
 ring> (opt. substd.) / heterocycle <containing 5-6 atoms,  
 1-2 heteroatoms, 0-2 O, 0-2 S (no other heteroatoms),  
 5- to 6-membered monocyclic ring> (opt. substd.) /  
 heterocycle <containing 6 atoms, 2 heteroatoms, 0-1 N,  
 0-1 O, 0-1 S (no other heteroatoms),  
 6-membered monocyclic ring> (opt. substd.) / 605

G31=O  
 605

G39 = CO<sub>2</sub>H / alkylsulfonyl <containing 1-10 C> /  
 heterocycle <containing 1-2 heteroatoms,  
 1-2 N (no other heteroatoms), 5-membered monocyclic ring>  
 Derivative: or pharmaceutically acceptable salts  
 Patent location: claim 1

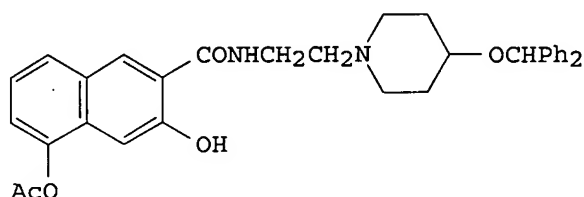
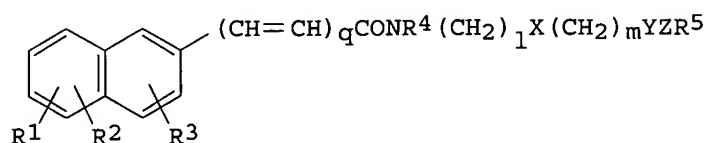
L29 ANSWER 37 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 117:191864 MARPAT  
 TITLE: Naphthamide derivatives  
 INVENTOR(S): Sekine, Yasuo; Yamaura, Tetsuaki; Nishimura, Masato;  
 Kojima, Eri; Emoto, Yasuko; Higashide, Yasushi  
 PATENT ASSIGNEE(S): Fujirebio Inc., Japan  
 SOURCE: Eur. Pat. Appl., 65 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|------|-----------------|------|
|------------|------|------|-----------------|------|

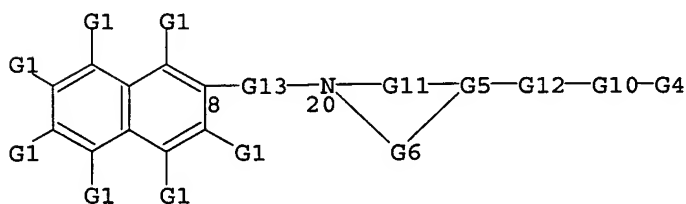
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| EP 492178                                                 | A2 | 19920701 | EP 1991-120553  | 19911129 |
| EP 492178                                                 | A3 | 19920805 |                 |          |
| EP 492178                                                 | B1 | 19951004 |                 |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE |    |          |                 |          |
| JP 04364156                                               | A2 | 19921216 | JP 1990-330004  | 19901130 |
| CA 2056662                                                | AA | 19920531 | CA 1991-2056662 | 19911129 |
| CA 2056662                                                | C  | 20000328 |                 |          |
| AT 128710                                                 | E  | 19951015 | AT 1991-120553  | 19911129 |
| ES 2077777                                                | T3 | 19951201 | ES 1991-120553  | 19911129 |
| KR 141683                                                 | B1 | 19980601 | KR 1991-21899   | 19911130 |
| US 5324728                                                | A  | 19940628 | US 1991-801501  | 19911202 |

PRIORITY APPLN. INFO.:

GI

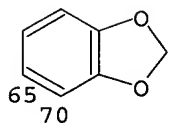


AB Naphthamides I [R1, R2, R3 = H, halo, OH, alkyl, alkoxy, alkanoyloxyalkyl, alkoxyalkyl, alkanoyloxyalkyl, aralkoxy; R4 = H, alkyl; R5 = (un)substituted aryl, (un)substituted heteroarom.; X = CHR6 (a cycloalkylene, bivalent N-containing heterocyclic group, or NR7, -R8-, NH, NHR8 (R6, R7 = H, alkyl, R8 = cycloalkylene, R6R7R4 = C1-3 alkylene); Y = S, SO, SO2, (CH2)n (n = 0, 1), O; Z = un(substituted)alkylene, bond; l = 0-4, m = 0-8, q = 0-1], useful as lipxygenase inhibitors were prepared. Thus, amidation of 3,5-dihydroxy-2-naphthoic acid 5-acetate with 1-(2-aminoethyl)-4-(benzhydryloxy)piperidine, prepared in 4 steps from benzhydrol and N-acetyl-4-(mesyloxy)piperidine, gave 73% naphthamide II, useful as a 5-lipxygenase inhibitor, thromboxane inhibitor, and as an antihistaminic.

**MSTR 1F**

G1 = 4 or more H / halo / OH / loweralkyl / loweralkoxy / loweralkanoyloxy / loweralkyl (substd. by OH) /

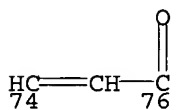
loweralkyl (substd. by loweralkoxy) /  
 loweralkyl (substd. by loweralkanoyloxy) / aralkyloxy /  
 loweralkoxy (substd. by heteroaryl)  
 G4 = aryl (opt. substd.) / heteroaryl (opt. substd.) /  
 (Specifically claimed: Ph (opt. substd.) / naphthyl / 65 /  
 70 / thienyl (opt. substd. by 1 or more halo) / furyl /  
 pyridyl)



G5 = CH / N  
 G6 = alkylene <containing 1-3 C> /  
 (Specifically claimed: CH<sub>2</sub>CH<sub>2</sub>)  
 G10 = bond / alkylene (opt. substd.) /  
 (Specifically claimed: 63 / CH<sub>2</sub>CH<sub>2</sub>)

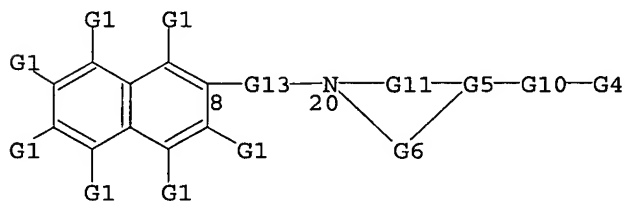
HC—G14  
 63

G11 = (0-4) CH<sub>2</sub>  
 G12 = alkylene <containing 1-9 C, unbranched>  
 G13 = C(O) / 74-8 76-20



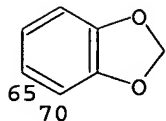
G14 = H / Ph (opt. substd. by 1 or more halo) / pyridyl  
 Derivative: or salts  
 Patent location: claim 1

# MSTR 1G



G1 = 4 or more H / halo / OH / loweralkyl / loweralkoxy /  
 loweralkanoyloxy / loweralkyl (substd. by OH) /  
 loweralkyl (substd. by loweralkoxy) /  
 loweralkyl (substd. by loweralkanoyloxy) / aralkyloxy /  
 loweralkoxy (substd. by heteroaryl)  
 G4 = aryl (opt. substd.) / heteroaryl (opt. substd.) /  
 (Specifically claimed: Ph (opt. substd.) / naphthyl / 65 /

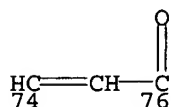
70 / thienyl (opt. substd. by 1 or more halo) / furyl / pyridyl)



G5 = CH / N  
 G6 = alkylene <containing 1-3 C> /  
 (Specifically claimed: CH<sub>2</sub>CH<sub>2</sub>)  
 G10 = bond / alkylene (opt. substd.) /  
 (Specifically claimed: 63 / CH<sub>2</sub>CH<sub>2</sub>)

HC—G14  
 63

G11 = (0-4) CH<sub>2</sub>  
 G13 = C(O) / 74-8 76-20

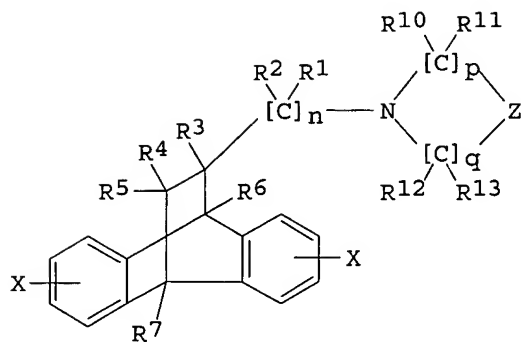


G14 = H / Ph (opt. substd. by 1 or more halo) / pyridyl  
 Derivative: or salts  
 Patent location: claim 1

L29 ANSWER 38 OF 40 MARPAT COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 116:51593 MARPAT  
 TITLE: Use of bridged tricyclic amine derivatives for  
 treating neurodegenerative disorders and neurotoxic  
 injury  
 INVENTOR(S): Gray, Nancy M.; Contreras, Patricia C.  
 PATENT ASSIGNEE(S): G.D. Searle and Co., USA  
 SOURCE: U.S., 23 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

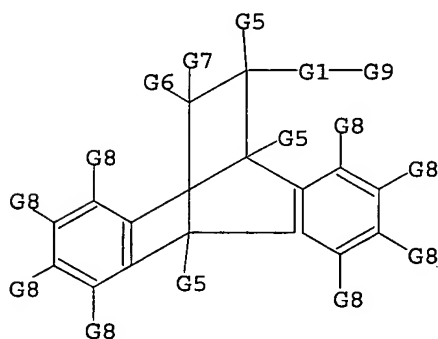
| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
| US 5055468             | A    | 19911008 | US 1989-428531  | 19891030 |
| US 5192762             | A    | 19930309 | US 1991-745027  | 19910814 |
| PRIORITY APPLN. INFO.: |      |          | US 1989-428531  | 19891030 |

GI



I

AB A neurodegenerative disorder or neurotoxic injury is treated by administering a therapeutically effective amount of bridged tricyclic amine derivs. I (R1, R2 = H, alkyl, cycloalkyl, aryl, halo, etc.; R3-7 = H, alkyl, OH, cycloalkyl, aralkyl, alkoxy, halo, etc.; n = 0-5; X = H, OH, alkyl, halo, CN, etc.; R10-13 = H, alkyl, cycloalkyl, halo, etc.; R1 and R2, R4 and R5, R10 and R11, R12 and R13 may form oxo; p,q = 1-4; Z = O, S, NR18; R18 = H, alkyl, cycloalkyl, etc., or R18 and 1 of R10-13 may form fused 5-8-membered heterocycle ring) or a pharmaceutically-acceptable salt. 4-[(9,10-Dihydro-9,10-ethanoanthracenyl)methyl]-1-methylpiperazine (II) (25 µg) blocked the effect of D-serine (200 µg) on cGMP in mice cerebellum. Cell loss in gerbils was reduced by 30 mg II/kg in a forebrain ischemia assay. II was prepared from anthracene and allyl alc. in 3 steps.

**MSTR 1B**

G1 = 40 / (Specifically claimed: C(O))

G2=O  
40

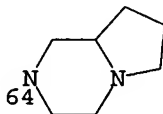
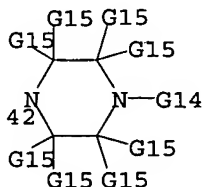
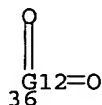
G2 = carbon chain <containing 1-5 C, saturated, unbranched> (opt. substd. by 1 or more G3)

G3 = alkyl <containing 1-10 C>  
(opt. substd. by 1 or more cycloalkyl <containing 3-10 C>) /  
cycloalkyl <containing 3-10 C> / aralkyl / aryl /  
alkyl <containing 1-10 C> (substd. by 1 or more OH) /  
alkyl <containing 1-10 C> (substd. by 1 or more alkoxy) /



- halo
- G5 = H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more cycloalkyl <containing 3-10 C>) /  
OH / cycloalkyl <containing 3-10 C> / aralkyl / aryl /  
alkoxy <containing 1-10 C> / alkyl <containing 1-10 C>  
(substd. by 1 or more alkoxy <containing 1-10 C>) / aryloxy /  
aralkyloxy / alkyl <containing 1-10 C>.  
(substd. by 1 or more OH) / halo /  
alkyl <containing 1-10 C> (substd. by 1 or more halo)
- G6 = H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more cycloalkyl <containing 3-10 C>) /  
OH / cycloalkyl <containing 3-10 C> / aralkyl / aryl /  
alkoxy <containing 1-10 C> / alkyl <containing 1-10 C>  
(substd. by 1 or more alkoxy <containing 1-10 C>) / aryloxy /  
aralkyloxy / alkyl <containing 1-10 C>  
(substd. by 1 or more OH) / halo /  
alkyl <containing 1-10 C> (substd. by 1 or more halo)
- G7 = H / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more cycloalkyl <containing 3-10 C>) /  
OH / cycloalkyl <containing 3-10 C> / aralkyl / aryl /  
alkoxy <containing 1-10 C> / alkyl <containing 1-10 C>  
(substd. by 1 or more alkoxy <containing 1-10 C>) / aryloxy /  
aralkyloxy / alkyl <containing 1-10 C>  
(substd. by 1 or more OH) / halo /  
alkyl <containing 1-10 C> (substd. by 1 or more halo)
- G8 = H / OH / alkyl <containing 1-10 C>  
(opt. substd. by 1 or more cycloalkyl <containing 3-10 C>) /  
cycloalkyl <containing 3-10 C> / aralkyl / aryl /  
alkoxy <containing 1-10 C> / aralkyloxy / aryloxy /  
alkyl <containing 1-10 C> (substd. by 1 or more alkoxy) /  
alkyl <containing 1-10 C> (substd. by 1 or more halo) /  
alkyl <containing 1-10 C> (substd. by 1 or more OH) / halo /  
CN / NH2 / alkylamino <containing 1-10 C> /  
dialkylamino <each alkyl containing 1-10 C> / NO2 / CO2H /  
alkyl <containing 1-10 C> (substd. by 1 or more CO2H) /  
alkanoyl
- G9 = heterocycle <containing 2 heteroatoms, 1 or more N,  
zero or more O, zero or more S (no other heteroatoms),  
2-8 C, attached through 1 or more N, non-aromatic,  
saturated, 4- to 10-membered monocyclic ring>  
(opt. substd. by 1 or more G10) /  
heterocycle <containing 2 heteroatoms,  
2 N (no other heteroatoms), 2-8 C,  
attached through 1 or more N, non-aromatic, saturated,  
bicyclic> (opt. substd.) / 34 / 36 /  
(Specifically claimed: 42 / 64)

G12=O  
34



- G10 = alkyl <containing 1-10 C>  
(opt. substd. by 1 or more cycloalkyl <containing 3-10 C>) /  
cycloalkyl <containing 3-10 C> / aralkyl / aryl /

alkyl <containing 1-10 C> (substd. by 1 or more alkoxy  
<containing 1-10 C>) / alkyl <containing 1-10 C>  
(substd. by 1 or more OH) / halo / (up to 1) G11

G11 = heteroaryl <containing 1-2 heteroatoms,  
zero or more O, zero or more N,  
zero or more S (no other heteroatoms), monocyclic> / CHO /  
alkylcarbonyl (opt. substd. by 1 or more aryl) /  
arylcarbonyl / alkyl <containing 1-10 C>  
(substd. by 1 or more NH2) / alkyl <containing 1-10 C>  
(substd. by 1 or more alkylamino <containing 1-10 C>) /  
alkyl <containing 1-10 C> (substd. by 1 or more dialkylamino  
<each alkyl containing 1-10 C>)

G12 = heterocycle <containing 2 heteroatoms, 1 or more N,  
zero or more O, zero or more S (no other heteroatoms),  
2-8 C, attached through 1 or more N, non-aromatic,  
saturated, 4- to 10-membered monocyclic ring>  
(opt. substd.) / heterocycle <containing 2 heteroatoms,  
2 N (no other heteroatoms), 2-8 C,  
attached through 1 or more N, non-aromatic, saturated,  
bicyclic> (opt. substd.)

G14 = H / alkyl <containing 1-5 C> /  
cycloalkyl <containing 5-6 C> /  
alkyl <containing 1-4 C> (substd. by 1 or more cycloalkyl  
<containing 3-6 C>) / Ph / alkyl <containing 1-5 C>  
(substd. by 1 or more OH) / heterocycle <containing 1-2  
heteroatoms, 1 or more N (no other heteroatoms),  
5- to 7-membered monocyclic ring> / Me / CH<sub>2</sub>CH<sub>2</sub>OH /  
2-pyrimidinyl / **CH<sub>2</sub>Ph**

G15 = H / alkyl <containing 1-5 C> / CH<sub>2</sub>Ph / Ph / halo

G6 +G7 = O

Derivative: or pharmaceutically acceptable salts

Patent location: claim 1

L29 ANSWER 39 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 115:232247 MARPAT

TITLE: Preparation of imidazolesulfonamides as antithrombotic agents

INVENTOR(S): Graeve, Rolf; Okyayuz-Baklouti, Ismahan; Seiffge, Dirk

PATENT ASSIGNEE(S): Hoechst A.-G., Germany

SOURCE: Ger. Offen., 39 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

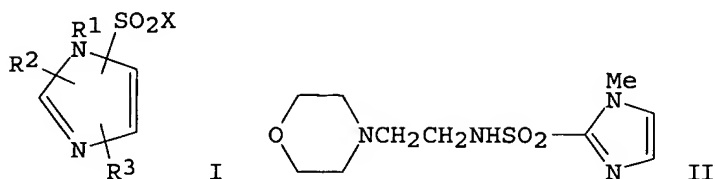
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.                                                | KIND | DATE     | APPLICATION NO. | DATE     |
|-----------------------------------------------------------|------|----------|-----------------|----------|
| DE 4004061                                                | A1   | 19910814 | DE 1990-4004061 | 19900210 |
| EP 442348                                                 | A2   | 19910821 | EP 1991-101497  | 19910205 |
| EP 442348                                                 | A3   | 19920304 |                 |          |
| EP 442348                                                 | B1   | 19960717 |                 |          |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE |      |          |                 |          |
| AT 140452                                                 | E    | 19960815 | AT 1991-101497  | 19910205 |
| ES 2090150                                                | T3   | 19961016 | ES 1991-101497  | 19910205 |
| FI 9100602                                                | A    | 19910811 | FI 1991-602     | 19910207 |
| BR 9100520                                                | A    | 19911029 | BR 1991-520     | 19910207 |
| CA 2035988                                                | AA   | 19910811 | CA 1991-2035988 | 19910208 |

|                        |    |          |                 |          |
|------------------------|----|----------|-----------------|----------|
| NO 9100496             | A  | 19910812 | NO 1991-496     | 19910208 |
| AU 9170848             | A1 | 19910815 | AU 1991-70848   | 19910208 |
| AU 634342              | B2 | 19930218 |                 |          |
| HU 56549               | A2 | 19910930 | HU 1991-415     | 19910208 |
| HU 207997              | B  | 19930728 |                 |          |
| ZA 9100948             | A  | 19911030 | ZA 1991-948     | 19910208 |
| JP 04316561            | A2 | 19921106 | JP 1991-60750   | 19910208 |
| JP 3026847             | B2 | 20000327 |                 |          |
| US 5232922             | A  | 19930803 | US 1991-652606  | 19910208 |
| CN 1053919             | A  | 19910821 | CN 1991-100969  | 19910209 |
| US 5356922             | A  | 19941018 | US 1993-57887   | 19930507 |
| PRIORITY APPLN. INFO.: |    |          | DE 1990-4004061 | 19900210 |
|                        |    |          | US 1991-652606  | 19910208 |

GI

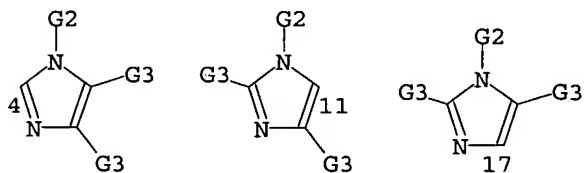


AB The title compds. [I; R<sub>1</sub> = alkyl; R<sub>2</sub>, R<sub>3</sub> = H, halo, alkyl; X = OH, NR<sub>4</sub>R<sub>5</sub>; R<sub>4</sub> = H, (un)substituted alkyl; R<sub>5</sub> = phenylalkyl, (un)substituted alkyl, etc.] were prepared Thus, 1-methyl-2-imidazolesulfonyl chloride was condensed with 2-morpholinoethylamine to give title compound II.HCl which gave 45% inhibition of laser-induced thromboses in rats at 10 mg/kg orally.

## MSTR 1B

G1—SO<sub>2</sub>—G5—G4—G15—G8

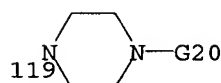
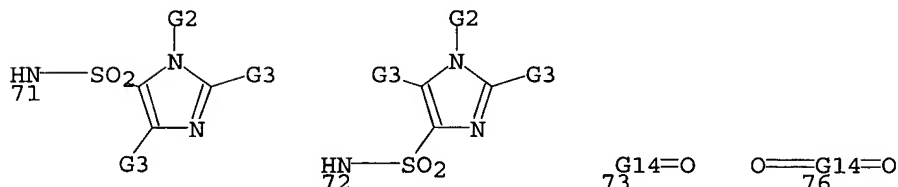
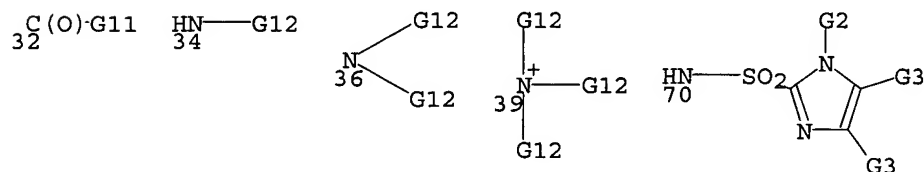
G1 = 4 / 11 / 17



G2 = alkyl <containing 1-6 C> /  
(Specifically claimed: Me / Et)  
G3 = H / halo / F / Cl / Br / I /  
alkyl <containing 1-3 C> / (Specifically claimed: Me)  
G4 = alkylene <containing 1-5 C>  
(opt. substd. by 1 or more G9)  
G5 = NH / 30

N—G6  
30

- G6 = alkyl <containing 1-7 C>  
(opt. substd. by 1 or more G7)
- G7 = CN / NH<sub>2</sub> / CO<sub>2</sub>H
- G8 = alkyl <containing 1-5 C>  
(opt. substd. by 1 or more G9)
- G9 = OH / alkoxy <containing 1-3 C> /  
Ph (opt. substd. by (1-3) G10) / 32 / CN /  
alkynyl <containing 2-5 C> / NH<sub>2</sub> / 34 / 36 / 39 /  
alkylcarbonylamino <containing 1-6 C> / 70 / 71 / 72 /  
heterocycle <containing 1-2 heteroatoms, 1 or more N,  
zero or more O, zero or more S (no other heteroatoms),  
5- to 7-membered monocyclic ring>  
(opt. substd. by 1 or more G13) / 73 / 76 /  
heterocycle <containing 3-4 heteroatoms, 1-2 N,  
zero or more O, zero or more S (no other heteroatoms),  
bicyclic, 5-, 6- or 7-membered rings only>  
(opt. substd. by 1 or more G13) /  
(Specifically claimed: morpholino / thiomorpholino / 119)



- G10 = OH / alkyl <containing 1-3 C> /  
alkoxy <containing 1-3 C> (substd. by 1 or more CO<sub>2</sub>H) /  
alkyl <containing 1-4 C> (substd. by 1 or more alkoxy  
<containing 1-3 C>)
- G11 = OH / alkoxy <containing 1-3 C> / NH<sub>2</sub>
- G12 = alkyl <containing 1-4 C> /  
alkyl <containing 1-5 C> (substd. by 1 or more alkoxy  
<containing 1-5 C>) / alkyl <containing 1-3 C>  
(substd. by 1 or more Ph) / (Specifically claimed: CH<sub>2</sub>Ph)
- G13 = alkyl <containing 1-3 C>  
(opt. substd. by 1 or more Ph) / Ph / OH /  
R <"ketal forming group">
- G14 = heterocycle <containing 1-2 heteroatoms,  
1 or more N, zero or more O, zero or more S (no other  
heteroatoms), 5- to 7-membered monocyclic ring>  
(opt. substd.) / heterocycle <containing 3-4 heteroatoms,

1-2 N, zero or more O, zero or more S (no other heteroatoms)  
, bicyclic, 5-, 6- or 7-membered rings only> (opt. substd.)

G15 = **phenylene**

G20 = H / Me / **CH<sub>2</sub>Ph**

Derivative: and physiologically acceptable salts

Patent location: claim 1

# MSTR 7B

H—G5—G4—G15—G8

G2 = alkyl <containing 1-6 C> /  
(Specifically claimed: Me / Et)

G3 = H / halo / F / Cl / Br / I /  
alkyl <containing 1-3 C> / (Specifically claimed: Me)

G4 = **alkylene** <containing 1-5 C>  
(opt. substd. by 1 or more G9)

G5 = NH / 30

<sup>N</sup><sub>30</sub>—G6

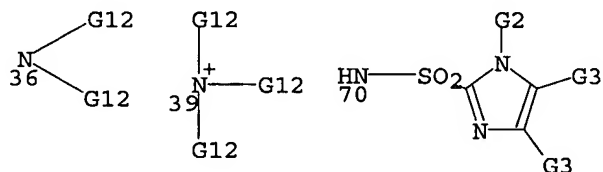
G6 = alkyl <containing 1-7 C>  
(opt. substd. by 1 or more G7)

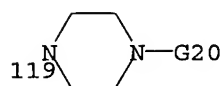
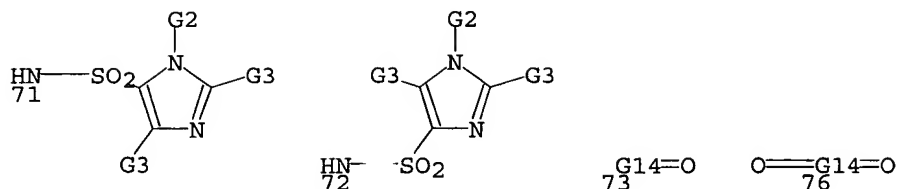
G7 = CN / NH<sub>2</sub> / CO<sub>2</sub>H

G8 = **alkyl** <containing 1-5 C>  
(opt. substd. by 1 or more G9)

G9 = OH / alkoxy <containing 1-3 C> /  
Ph (opt. substd. by (1-3) G10) / 32 / CN /  
alkynyl <containing 2-5 C> / NH<sub>2</sub> / 34 / 36 / 39 /  
alkylcarbonylamino <containing 1-6 C> / 70 / 71 / 72 /  
heterocycle <containing 1-2 heteroatoms, 1 or more N,  
zero or more O, zero or more S (no other heteroatoms),  
5- to 7-membered monocyclic ring>  
(opt. substd. by 1 or more G13) / 73 / 76 /  
heterocycle <containing 3-4 heteroatoms, 1-2 N,  
zero or more O, zero or more S (no other heteroatoms),  
bicyclic, 5-, 6- or 7-membered rings only>  
(opt. substd. by 1 or more G13) /  
(Specifically claimed: morpholino / thiomorpholino / 119)

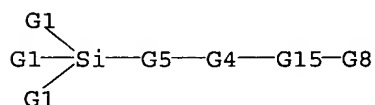
<sup>C(O)</sup><sub>32</sub>—G11    <sup>HN</sup><sub>34</sub>—G12



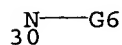


- G10 = OH / alkoxy <containing 1-3 C> /  
alkoxy <containing 1-3 C> (substd. by 1 or more CO<sub>2</sub>H) /  
alkyl <containing 1-4 C> (substd. by 1 or more alkoxy  
<containing 1-3 C>)
- G11 = OH / alkoxy <containing 1-3 C> / NH<sub>2</sub>
- G12 = alkyl <containing 1-4 C> /  
alkyl <containing 1-5 C> (substd. by 1 or more alkoxy  
<containing 1-5 C>) / alkyl <containing 1-3 C>  
(substd. by 1 or more Ph) / (Specifically claimed: CH<sub>2</sub>Ph)
- G13 = alkyl <containing 1-3 C>  
(opt. substd. by 1 or more Ph) / Ph / OH /  
R <"ketal forming group">
- G14 = heterocycle <containing 1-2 heteroatoms,  
1 or more N, zero or more O, zero or more S (no other  
heteroatoms), 5- to 7-membered monocyclic ring>  
(opt. substd.) / heterocycle <containing 3-4 heteroatoms,  
1-2 N, zero or more O, zero or more S (no other heteroatoms),  
bicyclic, 5-, 6- or 7-membered rings only> (opt. substd.)
- G15 = **phenylene**
- G20 = H / Me / **CH<sub>2</sub>Ph**
- Patent location: claim 6

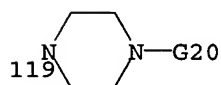
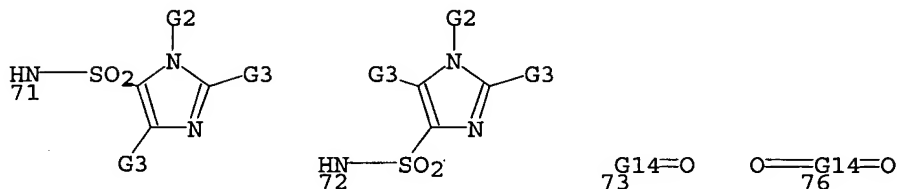
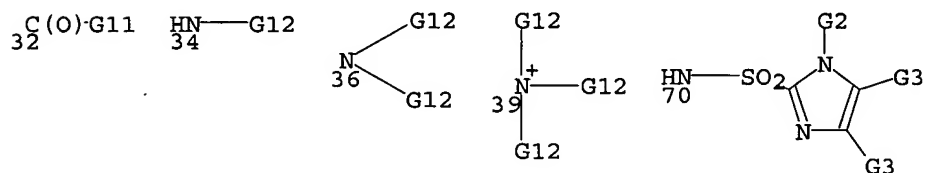
MSTR 8B



- G1 = alkyl <containing 1-3 C>  
G2 = alkyl <containing 1-6 C> /  
(Specifically claimed: Me / Et)  
G3 = H / halo / F / Cl / Br / I /  
alkyl <containing 1-3 C> / (Specifically claimed: Me)  
G4 = alkylene <containing 1-5 C>  
(opt. substd. by 1 or more G9)  
G5 = NH / 30



- G6 = alkyl <containing 1-7 C>  
(opt. substd. by 1 or more G7)
- G7 = CN / NH2 / CO2H
- G8 = alkyl <containing 1-5 C>  
(opt. substd. by 1 or more G9)
- G9 = OH / alkoxy <containing 1-3 C> /  
Ph (opt. substd. by (1-3) G10) / 32 / CN /  
alkynyl <containing 2-5 C> / NH2 / 34 / 36 / 39 /  
alkylcarbonylamino <containing 1-6 C> / 70 / 71 / 72 /  
heterocycle <containing 1-2 heteroatoms, 1 or more N,  
zero or more O, zero or more S (no other heteroatoms),  
5- to 7-membered monocyclic ring>  
(opt. substd. by 1 or more G13) / 73 / 76 /  
heterocycle <containing 3-4 heteroatoms, 1-2 N,  
zero or more O, zero or more S (no other heteroatoms),  
bicyclic, 5-, 6- or 7-membered rings only>  
(opt. substd. by 1 or more G13) /  
(Specifically claimed: morpholino / thiomorpholino / 119)



- G10 = OH / alkyl <containing 1-3 C> /  
alkoxy <containing 1-3 C> (substd. by 1 or more CO2H) /  
alkyl <containing 1-4 C> (substd. by 1 or more alkoxy  
<containing 1-3 C>)
- G11 = OH / alkoxy <containing 1-3 C> / NH2
- G12 = alkyl <containing 1-4 C> /  
alkyl <containing 1-5 C> (substd. by 1 or more alkoxy  
<containing 1-5 C>) / alkyl <containing 1-3 C>  
(substd. by 1 or more Ph) / (Specifically claimed: CH2Ph)
- G13 = alkyl <containing 1-3 C>  
(opt. substd. by 1 or more Ph) / Ph / OH /  
R <"ketal forming group">
- G14 = heterocycle <containing 1-2 heteroatoms,  
1 or more N, zero or more O, zero or more S (no other  
heteroatoms), 5- to 7-membered monocyclic ring>  
(opt. substd.) / heterocycle <containing 3-4 heteroatoms,

1-2 N, zero or more O, zero or more S (no other heteroatoms)  
 , bicyclic, 5-, 6- or 7-membered rings only> (opt. substd.)

G15 = **phenylene**

G20 = H / Me / **CH2Ph**

Patent location: claim 6

L29 ANSWER 40 OF 40 MARPAT COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 113:58945 MARPAT

TITLE: Preparation of 1,4-dihydropyridine-threonine  
 derivatives for treatment of circulatory and heart  
 diseases

INVENTOR(S): Stoltefuss, Juergen; Bechem, Martin; Gross, Rainer;  
 Hebisch, Siegfried; Schramm, Matthias

PATENT ASSIGNEE(S): Bayer A.-G., Fed. Rep. Ger.

SOURCE: Ger. Offen., 45 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

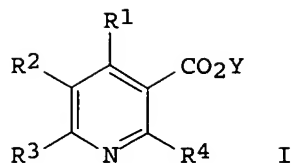
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.                                            | KIND | DATE     | APPLICATION NO. | DATE     |
|-------------------------------------------------------|------|----------|-----------------|----------|
| DE 3821334                                            | A1   | 19891228 | DE 1988-3821334 | 19880624 |
| EP 347678                                             | A2   | 19891227 | EP 1989-110528  | 19890610 |
| EP 347678                                             | A3   | 19901205 |                 |          |
| EP 347678                                             | B1   | 19970226 |                 |          |
| R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE |      |          |                 |          |
| EP 628538                                             | A1   | 19941214 | EP 1994-112407  | 19890610 |
| EP 628538                                             | B1   | 19970122 |                 |          |
| R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE |      |          |                 |          |
| AT 148095                                             | E    | 19970215 | AT 1994-112407  | 19890610 |
| AT 149154                                             | E    | 19970315 | AT 1989-110528  | 19890610 |
| ES 2098084                                            | T3   | 19970416 | ES 1994-112407  | 19890610 |
| AU 8936442                                            | A1   | 19970123 | AU 1989-36442   | 19890614 |
| US 5017590                                            | A    | 19910521 | US 1989-367408  | 19890615 |
| DD 284001                                             | A5   | 19901031 | DD 1989-329829  | 19890621 |
| FI 8903066                                            | A    | 19891225 | FI 1989-3066    | 19890622 |
| CA 1337074                                            | A1   | 19950919 | CA 1989-603600  | 19890622 |
| DK 8903129                                            | A    | 19891225 | DK 1989-3129    | 19890623 |
| JP 02053774                                           | A2   | 19900222 | JP 1989-159798  | 19890623 |
| HU 50772                                              | A2   | 19900328 | HU 1989-3207    | 19890623 |
| ZA 8904778                                            | A    | 19900328 | ZA 1989-4778    | 19890623 |
| JP 10067743                                           | A2   | 19980310 | JP 1997-224214  | 19890623 |
| CN 1039583                                            | A    | 19900214 | CN 1989-104392  | 19890624 |
| US 5138091                                            | A    | 19920811 | US 1990-612162  | 19901109 |
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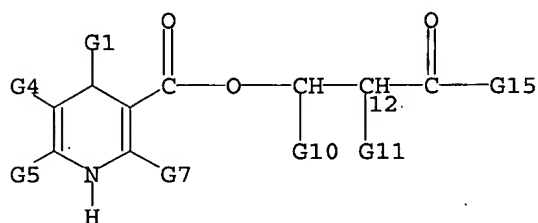
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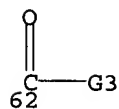


AB Title compds. [I; R' = (un)substituted C1-6 alkyl, C1-3 cydoalkyl, (un)substituted C6-10 aryl, or mono-, bi-, or tricyclic, unsatd. or saturated heterocyclyl; R<sub>2</sub> = cyano, NO<sub>2</sub>, halogen, (un)branched C1-12 alkyl, or (un)substituted phenyl; R<sub>3</sub> = (un)substituted C1-6 alkyl or cycloalkyl or cyano; R<sub>4</sub> = (un)substituted C1-12 alkyl or alkenyl, C3-8 cycloalkyl, (un)substituted phenyl; Y = CHACHBR5CO<sub>2</sub>R<sub>6</sub> where A = H or Me; B = a divalent group; R<sub>5</sub> = H, alkyl, alkenyl, cycloalkyl, aryl, or the like, R<sub>6</sub> = H, alkyl, cycloalkyl, phenyl] are prepared for treatment of circulatory and heart diseases (no data). Thus, benzylidenenitroacetone was heated with β-aminocrotonic acid (1R,2S)-[1-methyl-2-methoxycarbonyl-2-(4-tolylsulfamoyl)ethyl ester for 3 h to give 1,4-dihydro-2,6-dimethyl-3-nitro-4-phenylpyridine-5-carboxylic acid (1R,2S)-[1-methyl-2-methoxycarbonyl-2-(4-tolylsulfamoyl)]ethyl ester.

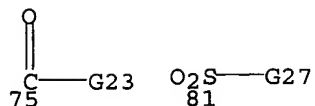
## MSTR 1B



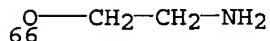
- G1 = alkyl <containing up to 6 C> /  
 (opt. substd. by 1 or more G<sub>2</sub>) /  
 cycloalkyl <containing 3-6 C> /  
 aryl <containing 6-10 C> (opt. substd.) /  
 heterocycle <containing 1-3 heteroatoms, zero or more N,  
 zero or more S, zero or more O (no other heteroatoms),  
 1-3 rings> (opt. substd. by 1 or more alkylthio <containing  
 1-4 C>)
- G2 = halo / OH / alkoxy <containing 1-8 C> / 62 /  
 carbocycle <containing 6 C, aromatic, bonds all normalized,  
 6-membered monocyclic ring>



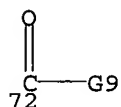
- G3 = OH / alkoxy <containing 1-8 C>  
 G4 = 75 / 81 / CO<sub>2</sub>H / alkoxycarbonyl <containing 1-10 C>



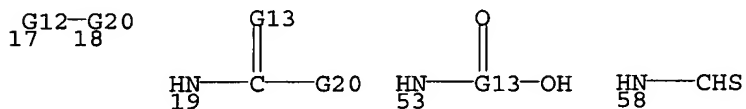
G5 = alkyl <containing up to 6 C>  
 (opt. substd. by 1 or more G6) /  
 cycloalkyl <containing up to 6 C>  
 (opt. substd. by 1 or more G6) / CN  
 G6 = OH / CN / Ph / halo / 66



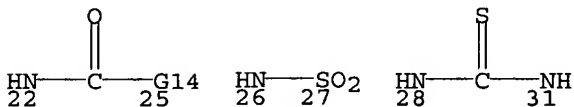
G7 = carbon chain <containing up to 12 C,  
 no triple bonds> (opt. substd. by 1 or more G8) /  
 cycloalkyl <containing 3-8 C> / Ph (opt. substd.)  
 G8 = halo / OH / alkoxy <containing 1-6 C> / CF3 / 72 /  
 carbocycle <containing 6 C, aromatic, bonds all normalized,  
 6-membered monocyclic ring> (opt. substd.)



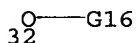
G9 = OH / alkoxy <containing 1-6 C>  
 G10 = H / Me  
 G11 = NH2 / NHCHO / 58 / 53 / NHCONH2 / NHCSNH2 / 17 / 19



G12 = NH / 22-12 25-18 / 26-12 27-18 / 28-12 31-18

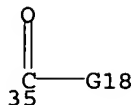


G13 = O / S  
 G14 = O / NH  
 G15 = OH / 32

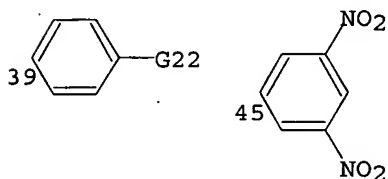


G16 = alkyl <containing up to 12 C>  
 (opt. substd. by 1 or more G17) /  
 cycloalkyl <containing 3-8 C> / Ph (opt. substd.) /  
 carbocycle <containing 6 C, aromatic, bonds all normalized,

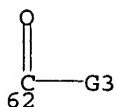
6-membered monocyclic ring> (substd. by 1 or more G19)  
 G17 = halo / OH / 35 / CN / alkylamino <containing 1-8 C>  
 / dialkylamino <each alkyl containing 1-8 C> /  
 alkoxy <containing 1-6 C> / Ph (opt. substd.)



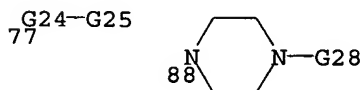
G18 = OH / alkoxy <containing 1-8 C> / R / NH2  
 G19 = halo / alkoxy <containing 1-3 C>  
 (opt. substd. by 1 or more halo) /  
 alkyl <containing 1-3 C> (substd. by 1 or more halo)  
 G20 = carbon chain <containing up to 12 C,  
 no triple bonds> (opt. substd. by 1 or more G21) /  
 cycloalkyl <containing 3-8 C> /  
 aryl <containing 6-10 C> (opt. substd.) /  
 heterocycle <containing 1-3 heteroatoms, zero or more N,  
 zero or more S, zero or more O (no other heteroatoms),  
 monocyclic> / (Examples: 39 / 45)



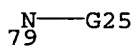
G21 = halo / OH / alkoxy <containing 1-8 C> / NO2 / CN /  
 alkylthio <containing 1-8 C> / 62 / Ph (opt. substd.)



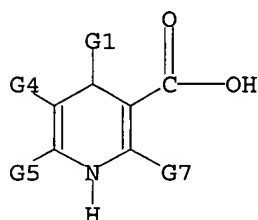
G22 = H / Me / NO2 / Cl  
 G23 = alkyl <containing 1-10 C> / 2-furyl / NH2 / 77 /  
 heterocycle <containing 1 or more N,  
 attached through 1 or more N, 5- to 7-membered monocyclic  
 ring> (opt. substd.) / (Specifically claimed: piperidino /  
 morpholino / 88)



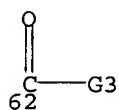
G24 = NH / 79



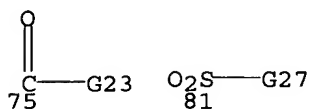
G25 = alkyl <containing up to 8 C>  
 (opt. substd. by 1 or more G26) /  
 cycloalkyl <containing 3-8 C> / Ph (opt. substd.)  
 G26 = CO<sub>2</sub>H / alkoxycarbonyl <containing 1-10 C> / R  
 G27 = alkyl <containing 1-8 C> / Ph (opt. substd.)  
 G28 = Me / CH<sub>2</sub>Ph  
 Derivative: and physiologically acceptable salts  
 Patent location: claim 1

**MSTR 10B**

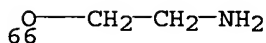
G1 = alkyl <containing up to 6 C>  
 (opt. substd. by 1 or more G2) /  
 cycloalkyl <containing 3-6 C> /  
 aryl <containing 6-10 C> (opt. substd.) /  
 heterocycle <containing 1-3 heteroatoms, zero or more N,  
 zero or more S, zero or more O (no other heteroatoms),  
 1-3 rings> (opt. substd. by 1 or more alkylthio <containing  
 1-4 C>)  
 G2 = halo / OH / alkoxy <containing 1-8 C> / 62 /  
 carbocycle <containing 6 C, aromatic, bonds all normalized,  
 6-membered monocyclic ring>



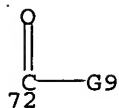
G3 = OH / alkoxy <containing 1-8 C>  
 G4 = 75 / 81 / CO<sub>2</sub>H / alkoxycarbonyl <containing 1-10 C>



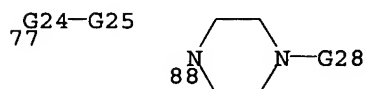
G5 = alkyl <containing up to 6 C>  
 (opt. substd. by 1 or more G6) /  
 cycloalkyl <containing up to 6 C>  
 (opt. substd. by 1 or more G6) / CN  
 G6 = OH / CN / Ph / halo / 66



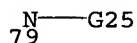
- G7 = carbon chain <containing up to 12 C,  
no triple bonds> (opt. substd. by 1 or more G8) /  
cycloalkyl <containing 3-8 C> / Ph (opt. substd.)
- G8 = halo / OH / alkoxy <containing 1-6 C> / CF<sub>3</sub> / 72 /  
carbocycle <containing 6 C, aromatic, bonds all normalized,  
6-membered monocyclic ring> (opt. substd.)



- G9 = OH / alkoxy <containing 1-6 C>
- G23 = alkyl <containing 1-10 C> / 2-furyl / NH<sub>2</sub> / 77 /  
heterocycle <containing 1 or more N,  
attached through 1 or more N, 5- to 7-membered monocyclic  
ring> (opt. substd.) / (Specifically claimed: piperidino /  
morpholino / 88)



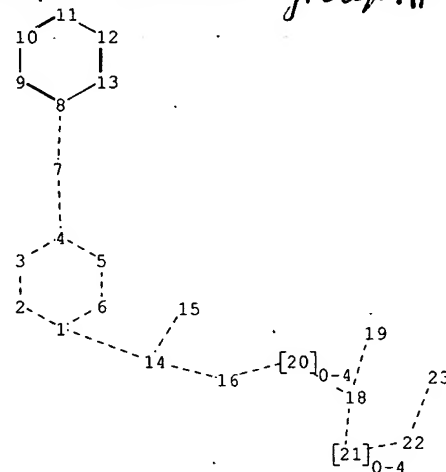
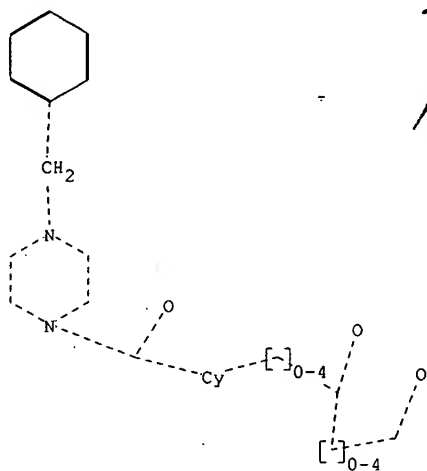
- G24 = NH / 79



- G25 = alkyl <containing up to 8 C>  
(opt. substd. by 1 or more G26) /  
cycloalkyl <containing 3-8 C> / Ph (opt. substd.)
- G26 = CO<sub>2</sub>H / alkoxy carbonyl <containing 1-10 C> / R
- G27 = alkyl <containing 1-8 C> / Ph (opt. substd.)
- G28 = Me / CH<sub>2</sub>Ph
- Patent location: claim 11



This structure and the structure on the next page produced the same exact hits in registry (203 total). The 13 corresponding CAPIus references are attached. Most do not show the proper aromatic group "Ar<sup>2</sup>".



chain nodes :

7 14 15 16 18 19 22 23

ring nodes :

1 2 3 4 5 6 8 9 10 11 12 13

ring/chain nodes :

20 21

chain bonds :

1-14 4-7 7-8 14-15 14-16 16-20 18-19 18-20 18-21 21-22 22-23

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-13 9-10 10-11 11-12 12-13

exact/norm bonds :

1-2 1-6 1-14 2-3 3-4 4-5 4-7 5-6 7-8 14-15 14-16 16-20 18-19 18-20 18-21 21-22 22-23

normalized bonds :

8-9 8-13 9-10 10-11 11-12 12-13

Connectivity :

14:3 E exact RC ring/chain 15:1 E exact RC ring/chain 18:3 E exact RC ring/chain  
19:1 E exact RC ring/chain 22:3 X maximum RC ring/chain 23:1 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:Atom 9:Atom 10:Atom 11:Atom  
12:Atom 13:Atom 14:CLASS 15:CLASS 16:Atom 18:CLASS 19:CLASS 20:CLASS 21:CLASS  
22:CLASS 23:CLASS

Generic attributes :

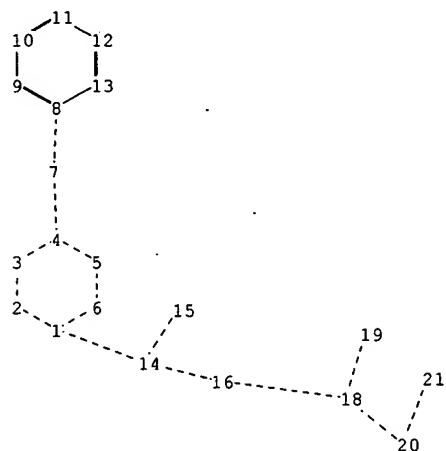
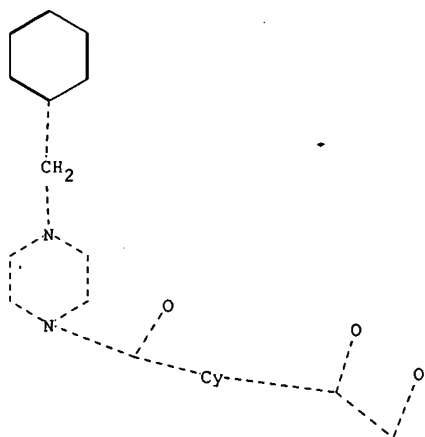
16:

Saturation : Unsaturated

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chain nodes :

7 14 15 16 18 19 20 21

ring nodes :

1 2 3 4 5 6 8 9 10 11 12 13

chain bonds :

1-14 4-7 7-8 14-15 14-16 16-18 18-19 18-20 20-21

ring bonds :

1-2 1-6 2-3 3-4 4-5 5-6 8-9 8-13 9-10 10-11 11-12 12-13

exact/norm bonds :

1-2 1-6 1-14 2-3 3-4 4-5 4-7 5-6 7-8 14-15 14-16 16-18 18-19 18-20 20-21

normalized bonds :

8-9 8-13 9-10 10-11 11-12 12-13

Connectivity :

14:3 E exact RC ring/chain 15:1 E exact RC ring/chain 18:3 E exact RC ring/chain  
19:1 E exact RC ring/chain 20:3 X maximum RC ring/chain 21:1 E exact RC ring/chain

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:CLASS 8:Atom 9:Atom 10:Atom 11:Atom  
12:Atom 13:Atom 14:CLASS 15:CLASS 16:Atom 18:CLASS 19:CLASS 20:CLASS 21:CLASS

Generic attributes :

16:

Saturation : Unsaturated

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=> file registry

FILE 'REGISTRY' ENTERED AT 09:13:12 ON 19 AUG 2005

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 18 AUG 2005 HIGHEST RN 860995-12-6

DICTIONARY FILE UPDATES: 18 AUG 2005 HIGHEST RN 860995-12-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

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*****
*
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*
*****
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Structure search iteration limits have been increased. See HELP SLIMITS for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:  
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> file caplus

FILE 'CAPLUS' ENTERED AT 09:13:16 ON 19 AUG 2005

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FILE COVERS 1907 - 19 Aug 2005 VOL 143 ISS 9

FILE LAST UPDATED: 18 Aug 2005 (20050818/ED)

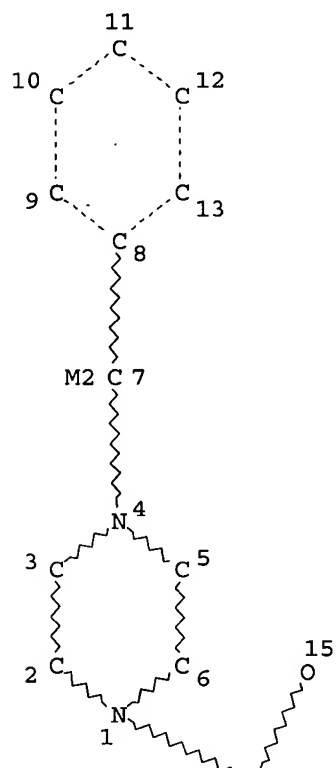
New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate

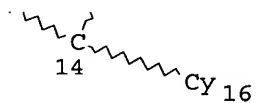
substance identification.

=> d stat que L24

L1 STR



Page 1-A



Page 2-A

NODE ATTRIBUTES:

| HCOUNT | IS | M2 | AT |    |
|--------|----|----|----|----|
| NSPEC  | IS | R  | AT | 1  |
| NSPEC  | IS | R  | AT | 2  |
| NSPEC  | IS | R  | AT | 3  |
| NSPEC  | IS | R  | AT | 4  |
| NSPEC  | IS | R  | AT | 5  |
| NSPEC  | IS | R  | AT | 6  |
| NSPEC  | IS | C  | AT | 7  |
| NSPEC  | IS | R  | AT | 8  |
| NSPEC  | IS | R  | AT | 9  |
| NSPEC  | IS | R  | AT | 10 |
| NSPEC  | IS | R  | AT | 11 |
| NSPEC  | IS | R  | AT | 12 |
| NSPEC  | IS | R  | AT | 13 |
| NSPEC  | IS | C  | AT | 14 |
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| NSPEC  | IS | C  | AT | 16 |

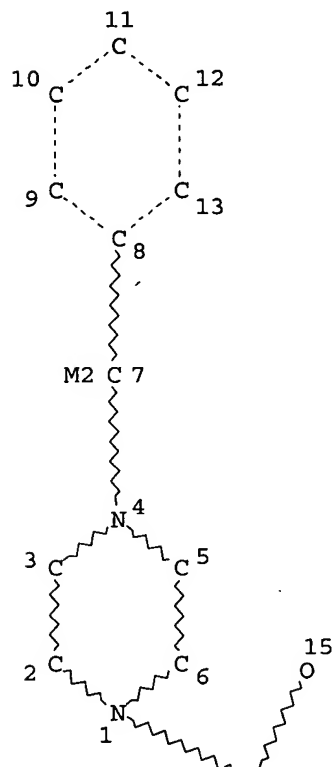
CONNECT IS E3 RC AT 14  
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 MLEVEL IS CLASS AT 7 14 15  
 GGCAT IS UNS AT 16  
 DEFAULT ECLEVEL IS LIMITED

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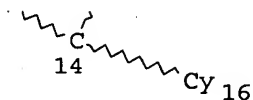
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 NUMBER OF NODES IS 16

## STEREO ATTRIBUTES: NONE

L2 5033 SEA FILE=REGISTRY SSS FUL L1  
 L3 STR



Page 1-A



Page 2-A

## NODE ATTRIBUTES:

|        |       |    |   |
|--------|-------|----|---|
| HCOUNT | IS M2 | AT | 7 |
| NSPEC  | IS R  | AT | 1 |
| NSPEC  | IS R  | AT | 2 |
| NSPEC  | IS R  | AT | 3 |
| NSPEC  | IS R  | AT | 4 |
| NSPEC  | IS R  | AT | 5 |
| NSPEC  | IS R  | AT | 6 |

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NSPEC   IS C      AT   7
NSPEC   IS R      AT   8
NSPEC   IS R      AT   9
NSPEC   IS R      AT  10
NSPEC   IS R      AT  11
NSPEC   IS R      AT  12
NSPEC   IS R      AT  13
NSPEC   IS C      AT  14
NSPEC   IS C      AT  15
NSPEC   IS C      AT  16
CONNECT IS E3  RC AT  14
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MLEVEL   IS CLASS AT   7 14 15
GGCAT    IS UNS   AT  16
DEFAULT ECLEVEL IS LIMITED

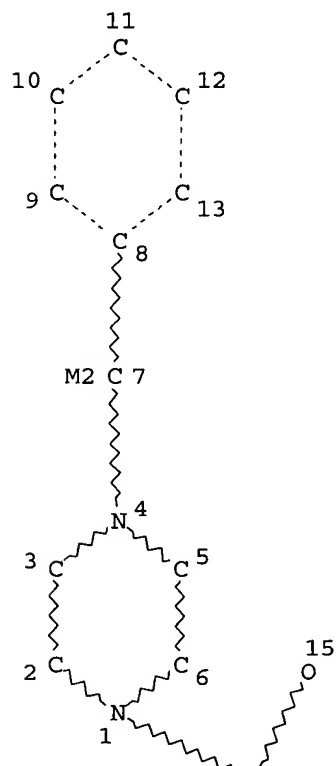
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## GRAPH ATTRIBUTES:

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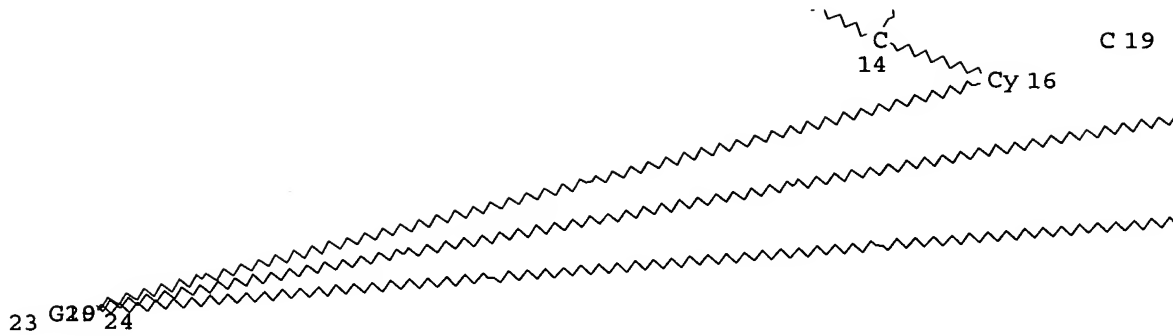
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L5 STR



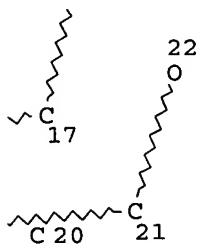
Page 1-A

18  
O  
~

Page 1-B



Page 2-A



Page 2-B

REP G19=(0-4) 20-17 20-21

REP G20=(0-4) 19-16 19-17

NODE ATTRIBUTES:

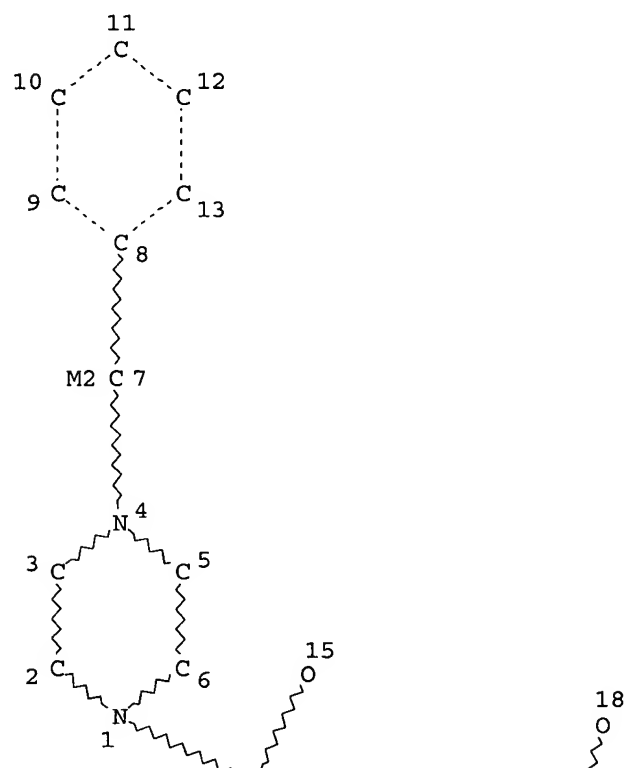
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| NSPEC   | IS R  | AT    | 2  |
| NSPEC   | IS R  | AT    | 3  |
| NSPEC   | IS R  | AT    | 4  |
| NSPEC   | IS R  | AT    | 5  |
| NSPEC   | IS R  | AT    | 6  |
| NSPEC   | IS C  | AT    | 7  |
| NSPEC   | IS R  | AT    | 8  |
| NSPEC   | IS R  | AT    | 9  |
| NSPEC   | IS R  | AT    | 10 |
| NSPEC   | IS R  | AT    | 11 |
| NSPEC   | IS R  | AT    | 12 |
| NSPEC   | IS R  | AT    | 13 |
| NSPEC   | IS C  | AT    | 14 |
| NSPEC   | IS C  | AT    | 15 |
| NSPEC   | IS C  | AT    | 16 |
| NSPEC   | IS C  | AT    | 17 |
| NSPEC   | IS C  | AT    | 18 |
| NSPEC   | IS RC | AT    | 19 |
| NSPEC   | IS RC | AT    | 20 |
| NSPEC   | IS C  | AT    | 21 |
| NSPEC   | IS C  | AT    | 22 |
| NSPEC   | IS C  | AT    | 23 |
| NSPEC   | IS C  | AT    | 24 |
| CONNECT | IS E3 | RC AT | 14 |
| CONNECT | IS E1 | RC AT | 15 |
| CONNECT | IS E3 | RC AT | 17 |

CONNECT IS E1 RC AT 18  
 CONNECT IS X3 RC AT 21  
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 MLEVEL IS CLASS AT 7 14 15 17 18 19 20 21 22  
 GGCAT IS UNS AT 16  
 DEFAULT ECLEVEL IS LIMITED

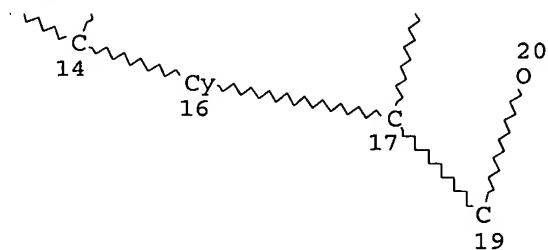
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 NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE

L6 203 SEA FILE=REGISTRY SUB=L4 SSS FUL L5  
 L14 STR



Page 1-A



Page 2-A

NODE ATTRIBUTES:

HCOUNT IS M2 AT 7



NSPEC IS R AT 1  
NSPEC IS R AT 2  
NSPEC IS R AT 3  
NSPEC IS R AT 4  
NSPEC IS R AT 5  
NSPEC IS R AT 6  
NSPEC IS C AT 7  
NSPEC IS R AT 8  
NSPEC IS R AT 9  
NSPEC IS R AT 10  
NSPEC IS R AT 11  
NSPEC IS R AT 12  
NSPEC IS R AT 13  
NSPEC IS C AT 14  
NSPEC IS C AT 15  
NSPEC IS C AT 16  
NSPEC IS C AT 17  
NSPEC IS C AT 18  
NSPEC IS C AT 19  
NSPEC IS C AT 20  
CONNECT IS E3 RC AT 14  
CONNECT IS E1 RC AT 15  
CONNECT IS E3 RC AT 17  
CONNECT IS E1 RC AT 18  
CONNECT IS X3 RC AT 19  
CONNECT IS E1 RC AT 20  
DEFAULT MLEVEL IS ATOM  
MLEVEL IS CLASS AT 7 14 15 17 18 19 20  
GGCAT IS UNS AT 16  
DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 20

## STEREO ATTRIBUTES: NONE

L18 203 SEA FILE=REGISTRY SUB=L2 SSS FUL L14  
L22 13 SEA FILE=CAPLUS ABB=ON PLU=ON L18  
L23 13 SEA FILE=CAPLUS ABB=ON PLU=ON L6  
L24 13 SEA FILE=CAPLUS ABB=ON PLU=ON L22 AND L23

=> d ibib abs hitstr L24 1-13

L24 ANSWER 1 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:232421 CAPLUS

DOCUMENT NUMBER: 142:316692

TITLE: Preparation of indolylcarboxamide derivatives as  
inhibitors of p38 kinase

INVENTOR(S): Mavunkel, Babu J.; Chakravarty, Sarvajit; Perumattam,  
John J.; Dugar, Sundeep; Lu, Qing; Liang, Xi

PATENT ASSIGNEE(S): Scios, Inc., USA

SOURCE: U.S., 65 pp., Cont.-in-part of U.S. 6,589,954.

CODEN: USXXAM

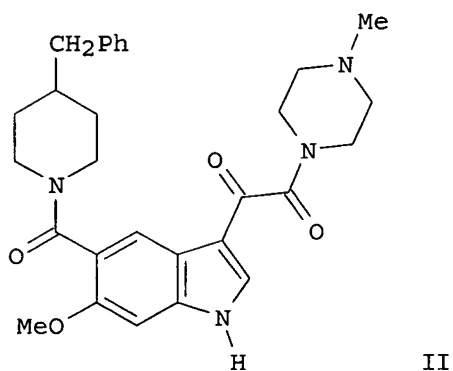
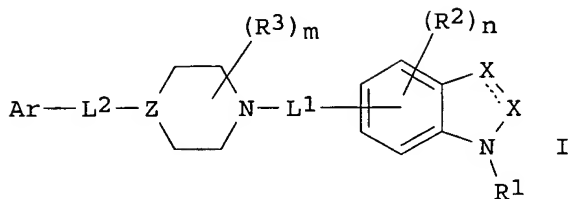
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 7

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE              | APPLICATION NO. | DATE        |
|------------------------|------|-------------------|-----------------|-------------|
| US 6867209             | B1   | 20050315          | US 2000-575060  | 20000519    |
| US 6130235             | A    | 20001010          | US 1998-128137  | 19980803    |
| US 6340685             | B1   | 20020122          | US 1999-275176  | 19990324    |
| US 6589954             | B1   | 20030708          | US 1999-316761  | 19990521    |
| US 2003158417          | A1   | 20030821          | US 2002-146703  | 20020514    |
| US 2003144520          | A1   | 20030731          | US 2002-157048  | 20020528    |
| US 6864260             | B2   | 20050308          |                 |             |
| US 2003162970          | A1   | 20030828          | US 2002-156996  | 20020528    |
| US 2003195355          | A1   | 20031016          | US 2002-156997  | 20020528    |
| PRIORITY APPLN. INFO.: |      |                   | US 1998-86531P  | P 19980522  |
|                        |      |                   | US 1998-128137  | A2 19980803 |
|                        |      |                   | US 1999-275176  | A2 19990324 |
|                        |      |                   | US 1999-316761  | A2 19990521 |
|                        |      |                   | US 1999-154594P | P 19990917  |
|                        |      |                   | US 2000-202608P | P 20000509  |
|                        |      |                   | US 2000-575060  | A1 20000519 |
| OTHER SOURCE(S) :      |      | MARPAT 142:316692 |                 |             |
| GI                     |      |                   |                 |             |



AB Title compds. I [X independently = CA, CR4A, CR5, CR52, NR6, or N; L1 = CO, SO2, or alkylene; L2 = (un)substituted-alkylene or -alkenylene; Ar = (un)substituted aryl group with substituents consisting of alkyl, alkenyl, halo, CN, etc.; Z = N or CR7 wherein R7 = H or non-interfering substituent; R1 = H, alkyl, alkenyl, alkynyl, aryl, arylalkyl, etc.; R2 independently = halo, alkyl, OH, alkoxy, etc.; R3 independently = CN, CF3, NO2, alkyl, aryl, acyl, etc.; R4 = H, halo, alkyl or alkenyl; R5 independently = H, halo, alkyl, OH, etc.; R6 = H, alkyl, alkenyl, aryl,

acyl, aroyl, etc.; A = -WiCOXjY wherein Y is COR8 wherein R8 = H, (un)substituted-alkyl, -alkenyl, -alkynyl, etc.; W and X = (un)substituted-alkylene, -alkenylene, -alkynylene; Y = tetrazole, 1,2,3-triazole, 1,2,4-triazole, or imidazole and each of i and j independently = 0 or 1; m = 0-4; n = 0-3], and their pharmaceutically acceptable salts are prepared and disclosed as useful for treatment of rheumatoid arthritis. Thus, e.g., II, was prepared by carbonylation of 6-methoxy-(4-benzylpiperidiny)-indole-5-carboxamide with oxalyl chloride and subsequent amination using 4-methylpiperazine. ELISA assays for evaluation of inhibition of p38 kinase by I revealed that all compds. of the invention possessed IC50 values in the range of 0.1-1.5  $\mu$ M. I as inhibitors of p38 kinase should prove useful in the treatment of rheumatoid arthritis.

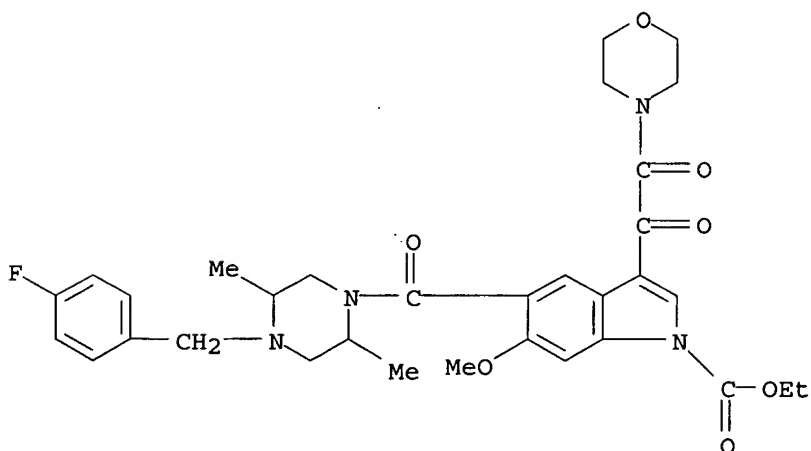
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 848128-14-3P 848128-17-6P 848128-18-7P  
 848128-19-8P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of indolylcarboxamide derivs. as p38 kinase inhibitors)

RN 309913-60-8 CAPLUS

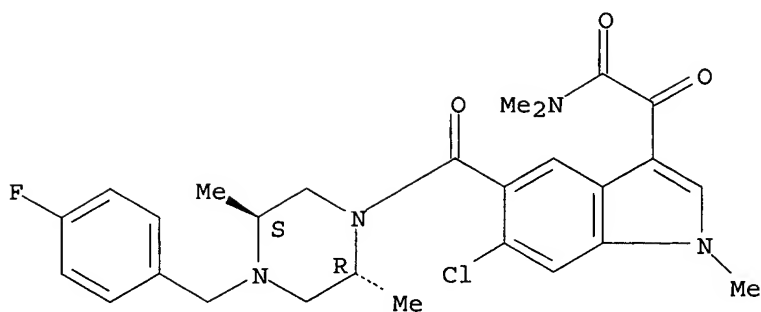
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RN 309913-83-5 CAPLUS

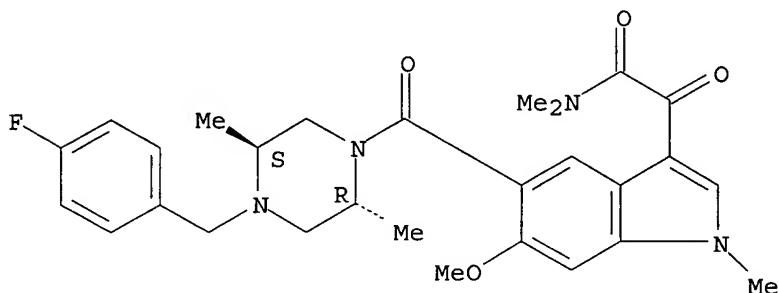
CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



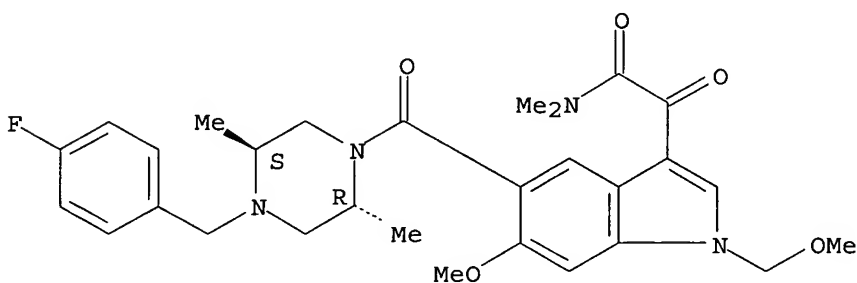
RN 309914-14-5 CAPLUS  
 CN 1H-Indole-3-acetamide, 5-[[ (2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,1-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



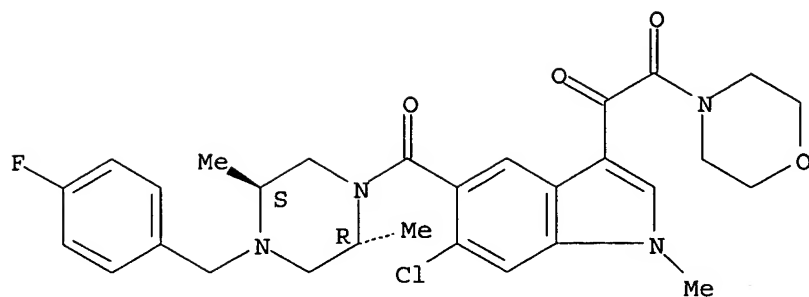
RN 309914-17-8 CAPLUS  
 CN 1H-Indole-3-acetamide, 5-[[ (2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1-(methoxymethyl)-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 309914-21-4 CAPLUS  
 CN Morpholine, 4-[[6-chloro-5-[[ (2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-methyl-1H-indol-3-yl]oxoacetyl]- (9CI) (CA INDEX NAME)

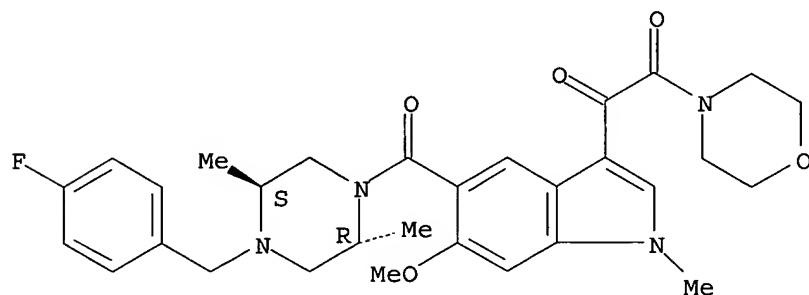
Absolute stereochemistry.



RN 309914-25-8 CAPLUS

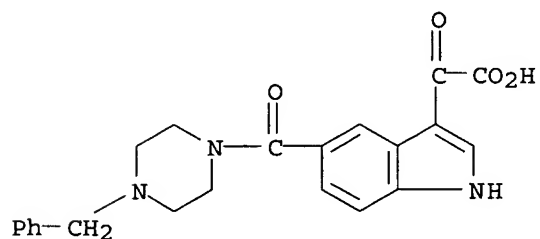
CN Morpholine, 4-[[5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1-methyl-1H-indol-3-yl]oxoacetyl]- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry.



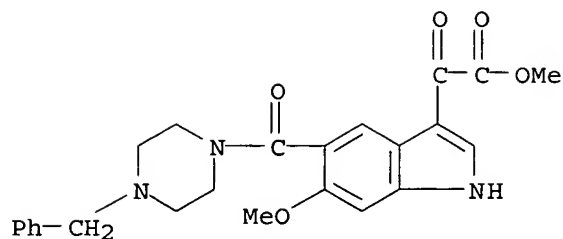
RN 309914-60-1 CAPLUS

CN 1H-Indole-3-acetic acid,  $\alpha$ -oxo-5-[[4-(phenylmethyl)-1-piperazinyl]carbonyl]- (9CI) (CA INDEX NAME)



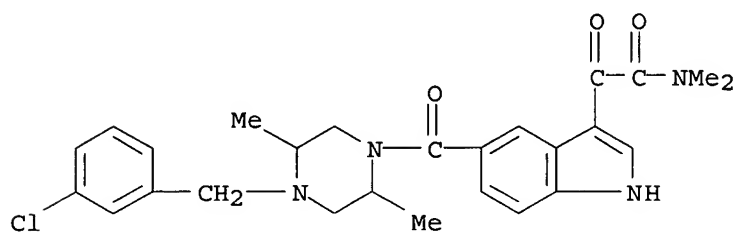
RN 309914-62-3 CAPLUS

CN 1H-Indole-3-acetic acid, 6-methoxy- $\alpha$ -oxo-5-[[4-(phenylmethyl)-1-piperazinyl]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)



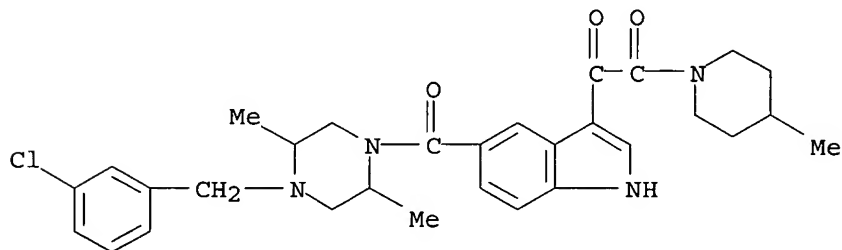
RN 309914-71-4 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl-α-oxo- (9CI) (CA INDEX NAME)



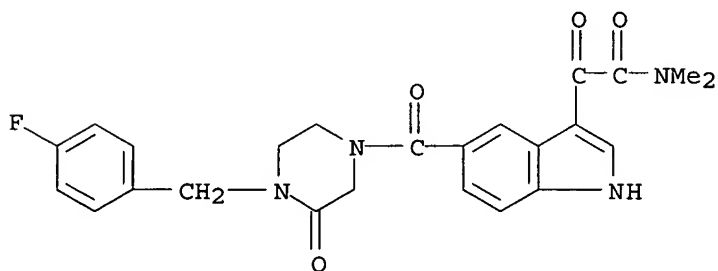
RN 309914-73-6 CAPLUS

CN Piperazine, 1-[(3-chlorophenyl)methyl]-2,5-dimethyl-4-[[3-[(4-methyl-1-piperidinyl)oxoacetyl]-1H-indol-5-yl]carbonyl]- (9CI) (CA INDEX NAME)

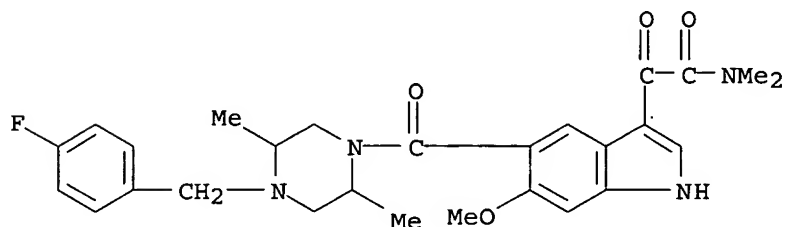


RN 309914-78-1 CAPLUS

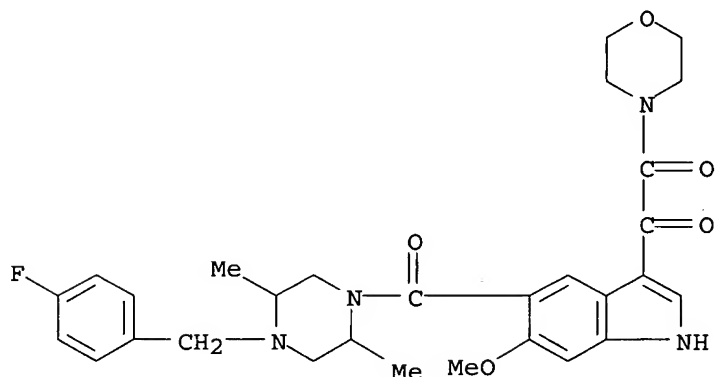
CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-3-oxo-1-piperazinyl]carbonyl]-N,N-dimethyl-α-oxo- (9CI) (CA INDEX NAME)



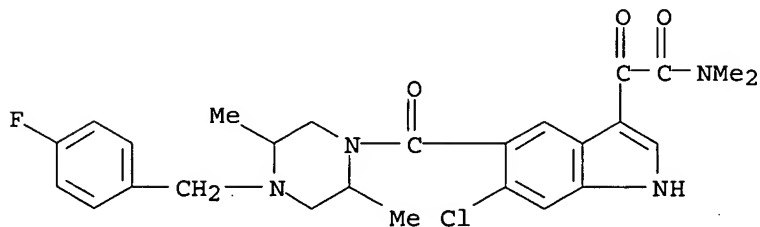
RN 309914-79-2 CAPLUS  
 CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



RN 309914-86-1 CAPLUS  
 CN Morpholine, 4-[[5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1H-indol-3-yl]oxoacetyl]- (9CI) (CA INDEX NAME)

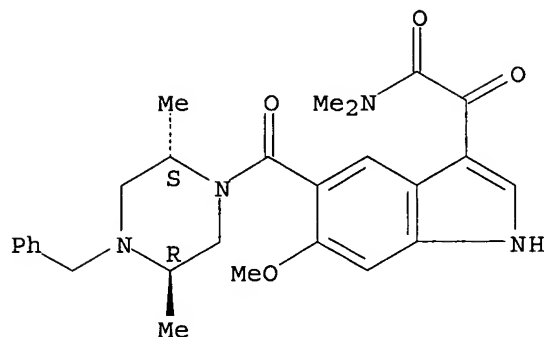


RN 309914-87-2 CAPLUS  
 CN 1H-Indole-3-acetamide, 6-chloro-5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



RN 309914-97-4 CAPLUS  
 CN 1H-Indole-3-acetamide, 5-[[[(2S,5R)-2,5-dimethyl-4-(phenylmethyl)-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

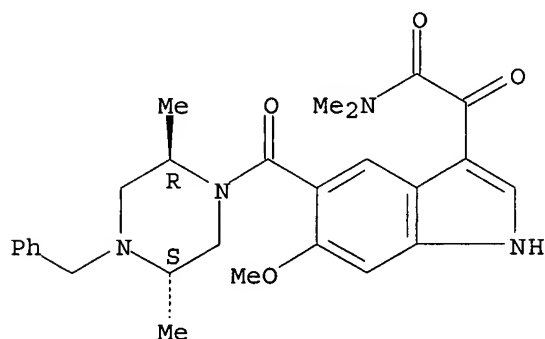
Absolute stereochemistry.



RN 309914-98-5 CAPLUS

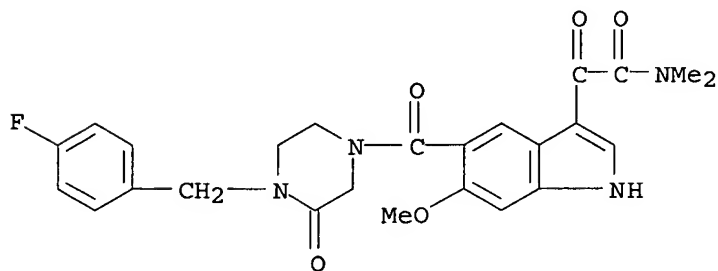
CN 1H-Indole-3-acetamide, 5-[[ (2R,5S)-2,5-dimethyl-4-(phenylmethyl)-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 309915-14-8 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-3-oxo-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

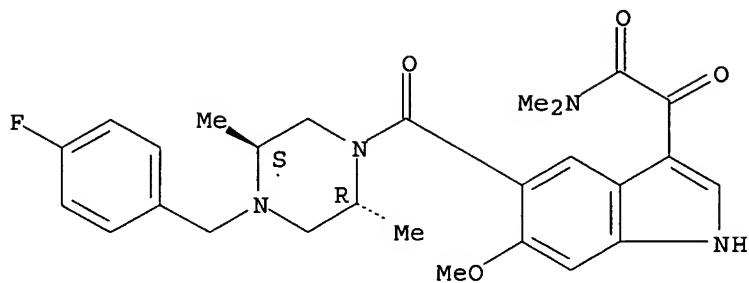


RN 672293-04-8 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[ (2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

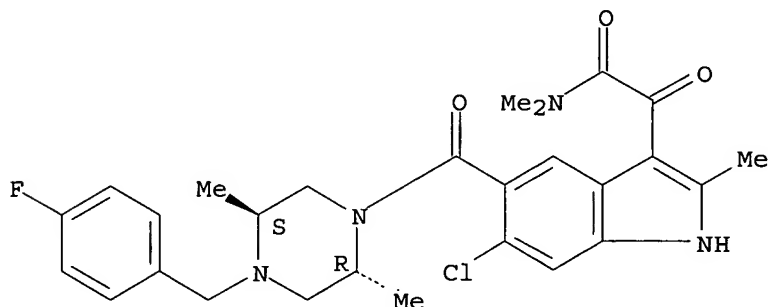


Absolute stereochemistry.



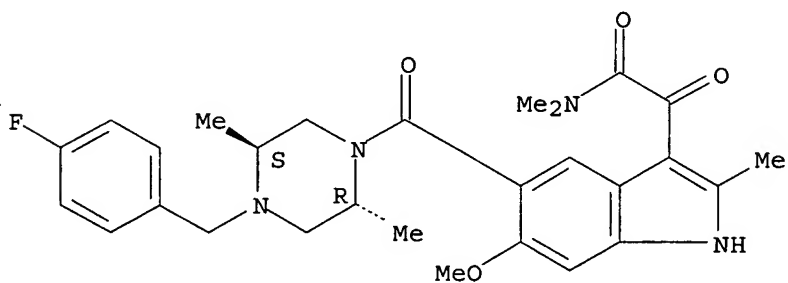
RN 672293-74-2 CAPLUS  
 CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,2-trimethyl- $\alpha$ -oxo- (9CI) (CA  
 INDEX NAME)

Absolute stereochemistry.



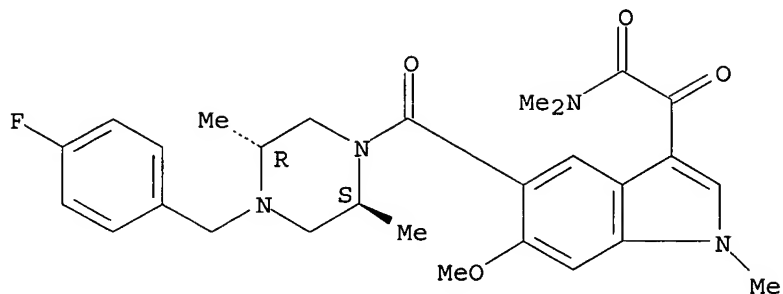
RN 672293-79-7 CAPLUS  
 CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,2-trimethyl- $\alpha$ -oxo- (9CI) (CA  
 INDEX NAME)

Absolute stereochemistry.



RN 848127-82-2 CAPLUS  
 CN 1H-Indole-3-acetamide, 5-[[[(2S,5R)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,1-trimethyl- $\alpha$ -oxo- (9CI) (CA  
 INDEX NAME)

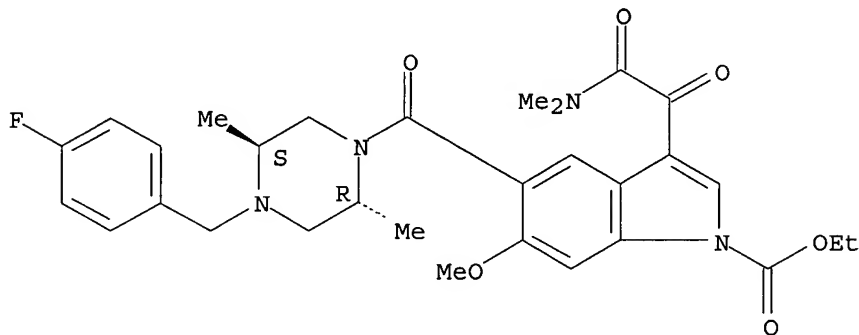
Absolute stereochemistry.



RN 848127-83-3 CAPLUS

CN 1H-Indole-1-carboxylic acid, 3-[(dimethylamino)oxoacetyl]-5-[[2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-, ethyl ester (9CI) (CA INDEX NAME)

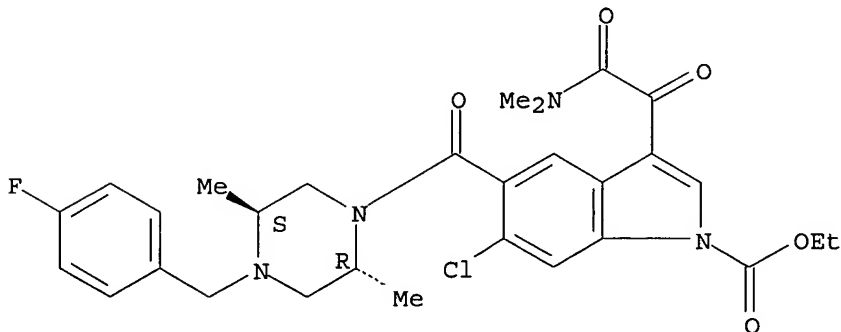
Absolute stereochemistry.



RN 848127-90-2 CAPLUS

CN 1H-Indole-1-carboxylic acid, 6-chloro-3-[(dimethylamino)oxoacetyl]-5-[[2,5-dimethyl-1-piperazinyl]carbonyl]-, ethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

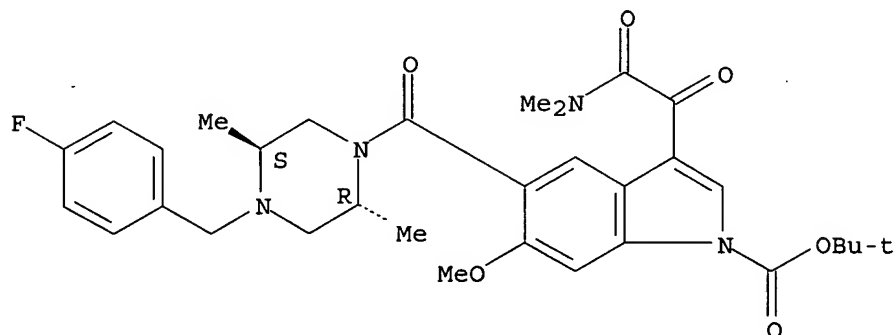


RN 848127-93-5 CAPLUS

CN 1H-Indole-1-carboxylic acid, 3-[(dimethylamino)oxoacetyl]-5-[[2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-, ethyl ester (9CI) (CA INDEX NAME)

[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-,  
1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

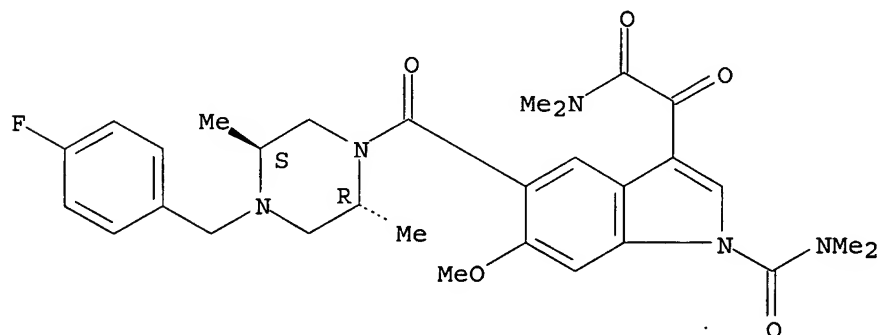
Absolute stereochemistry.



RN 848127-94-6 CAPLUS

CN 1H-Indole-3-acetamide, 1-[(dimethylamino)carbonyl]-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

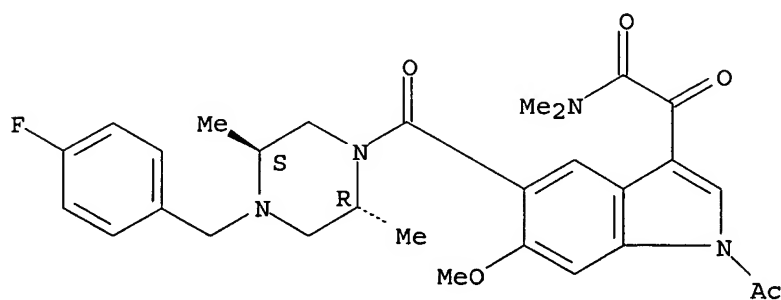
Absolute stereochemistry.



RN 848127-95-7 CAPLUS

CN 1H-Indole-3-acetamide, 1-acetyl-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

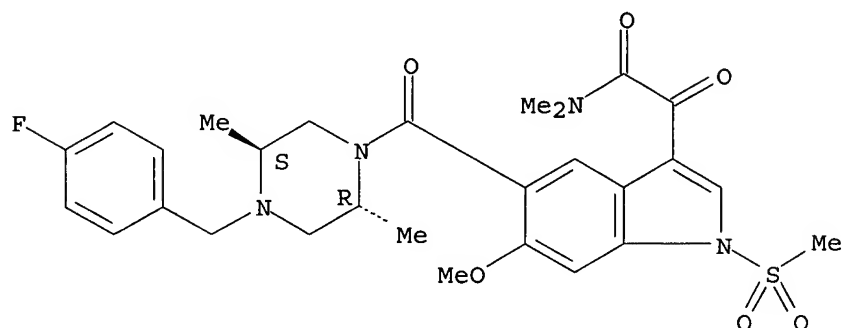
Absolute stereochemistry.



RN 848127-96-8 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl-1-(methylsulfonyl)- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

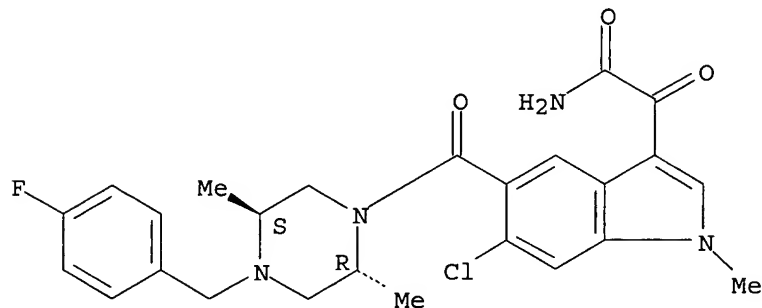
Absolute stereochemistry.



RN 848127-99-1 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-methyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

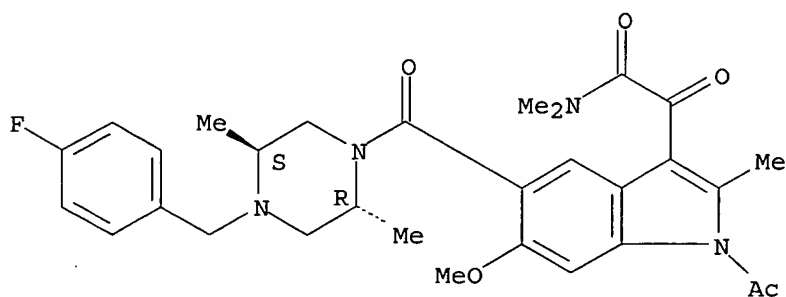
Absolute stereochemistry.



RN 848128-00-7 CAPLUS

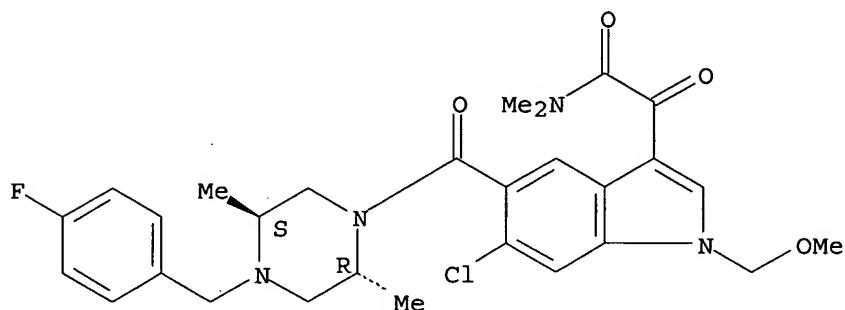
CN 1H-Indole-3-acetamide, 1-acetyl-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,2-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



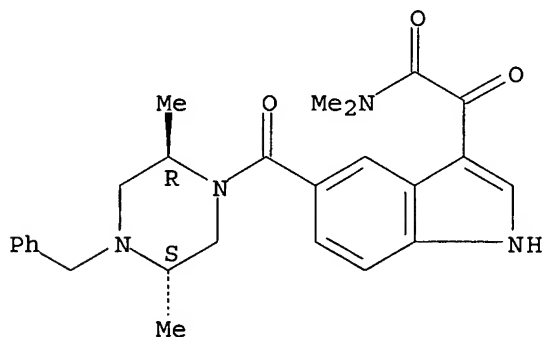
RN 848128-01-8 CAPLUS  
 CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-(methoxymethyl)-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



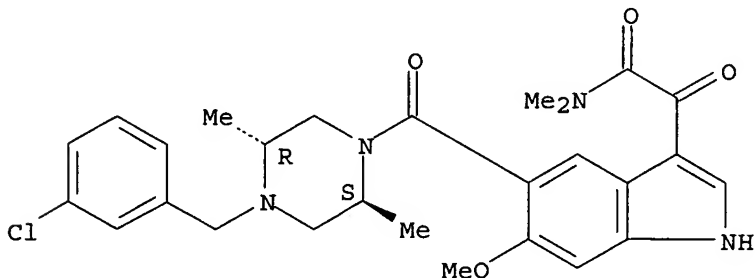
RN 848128-14-3 CAPLUS  
 CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-2,5-dimethyl-4-(phenylmethyl)-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 848128-17-6 CAPLUS  
 CN 1H-Indole-3-acetamide, 5-[[[(2S,5R)-4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

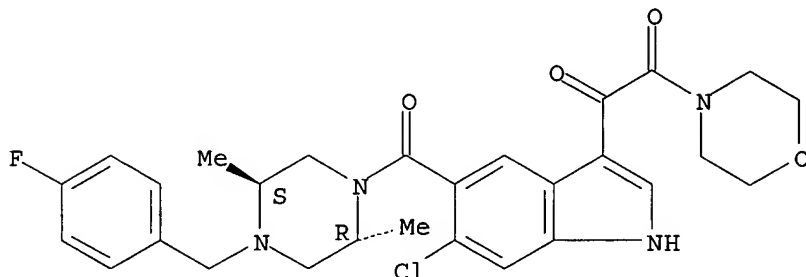
Absolute stereochemistry.



RN 848128-18-7 CAPLUS

CN Morpholine, 4-[[6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1H-indol-3-yl]oxoacetyl]- (9CI) (CA INDEX NAME)

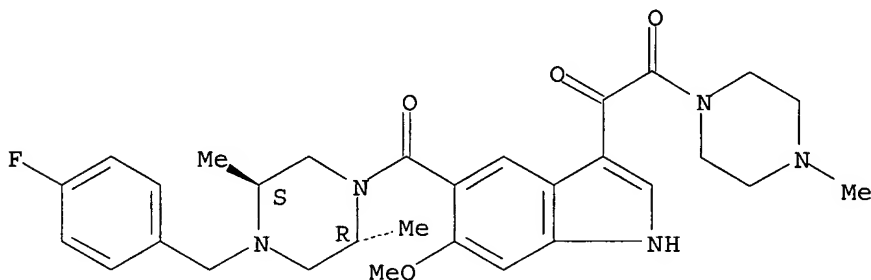
Absolute stereochemistry.



RN 848128-19-8 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-4-[[6-methoxy-3-[(4-methyl-1-piperazinyl)oxoacetyl]-1H-indol-5-yl]carbonyl]-2,5-dimethyl-, (2S,5R) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 2 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2005:162022 CAPLUS

DOCUMENT NUMBER: 142:254591

TITLE: Methods of screening for compounds that selectively inhibit p38 MAP kinase  $\alpha$  isoenzymes for use as immunomodulators

INVENTOR(S): Kirschenbaum, Ford; Higgins, Linda S.; Schreiner, George F.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 41 pp., Cont.-in-part of U.S. Ser. No. 683,656.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

|                        |    |          |                 |             |
|------------------------|----|----------|-----------------|-------------|
| US 2005043212          | A1 | 20050224 | US 2004-830834  | 20040422    |
| US 2004176598          | A1 | 20040909 | US 2003-683656  | 20031009    |
| PRIORITY APPLN. INFO.: |    |          | US 2002-417599P | P 20021009  |
|                        |    |          | US 2003-683656  | A2 20031009 |

AB The invention relates to methods of screening for compds. that selectively inhibit p38 MAP kinase  $\alpha$  isoenzymes for use as immunomodulators.

Inhibitors of p38 MAP kinase  $\alpha$  isoenzyme include siRNA and SB203580.

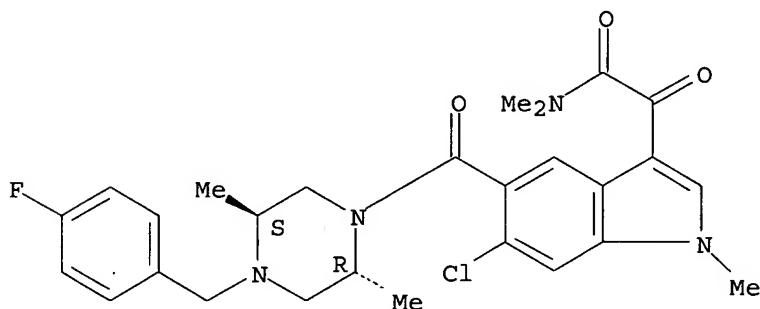
IT 309915-13-7 845537-39-5 845537-40-8  
845537-41-9

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(methods of screening for compds. that selectively inhibit p38 MAP  
kinase  $\alpha$  isoenzymes for use as immunomodulators)

RN 309915-13-7 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl- $\alpha$ -oxo-, rel- (9CI)  
(CA INDEX NAME)

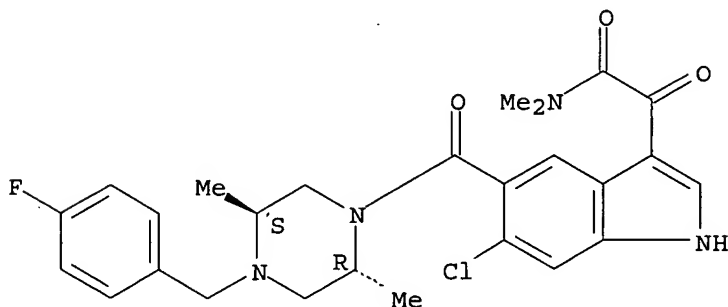
Relative stereochemistry.



RN 845537-39-5 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI)  
(CA INDEX NAME)

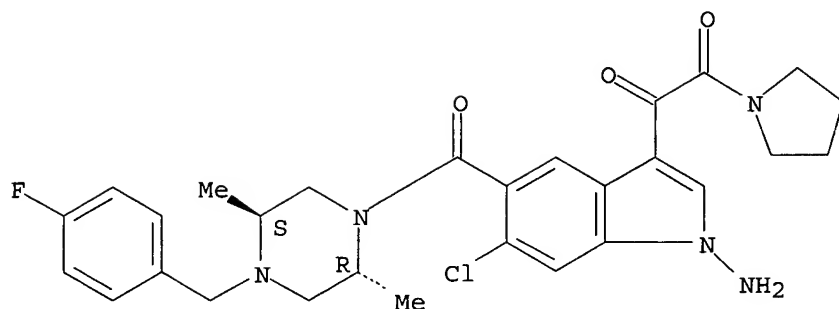
Relative stereochemistry.



RN 845537-40-8 CAPLUS

CN Piperazine, 1-[[[1-amino-6-chloro-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)-rel- (9CI)  
(CA INDEX NAME)

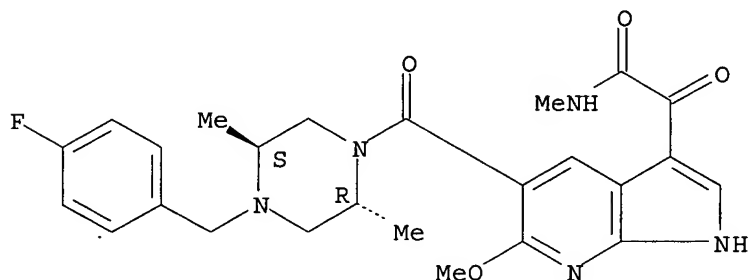
Relative stereochemistry.



RN 845537-41-9 CAPLUS

CN 1H-Pyrrolo[2,3-b]pyridine-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N-methyl-α-oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L24 ANSWER 3 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:515679 CAPLUS

DOCUMENT NUMBER: 141:47344

TITLE: Methods using p38 mitogen-activated protein kinase inhibitors for treating diabetes

INVENTOR(S): Medicherla, Satyanarayana; Protter, Andrew A.; Schreiner, George F.

PATENT ASSIGNEE(S): Scios Inc., USA

SOURCE: PCT Int. Appl., 104 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| WO 2004053107 | A2   | 20040624 | WO 2003-US40140 | 20031205 |
| WO 2004053107 | A3   | 20041007 |                 |          |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW



RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,  
 BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
 ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,  
 TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2004171659 A1 20040902 US 2003-728665 20031205

PRIORITY APPLN. INFO.: US 2002-431241P P 20021206

AB The invention discloses methods for treating diabetes by administering p38 mitogen-activated protein kinase inhibitors. The invention also discloses methods of decreasing blood glucose level in diabetes patients by administering p38 mitogen-activated protein kinase inhibitors.

IT 309913-41-5 309913-59-5 309914-17-8

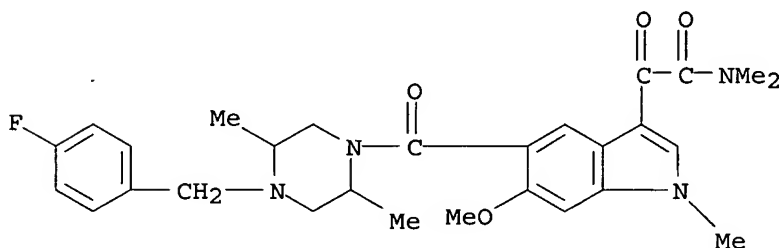
309914-25-8 309914-79-2

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(p38 MAP kinase inhibitors for treatment of diabetes)

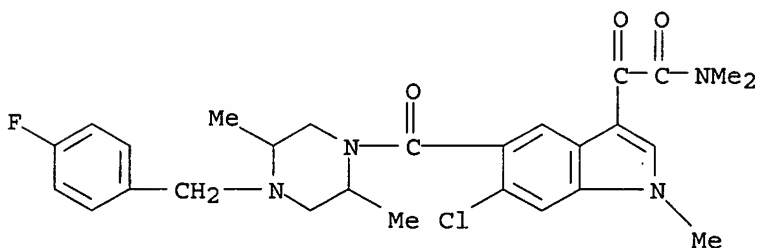
RN 309913-41-5 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,1-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



RN 309913-59-5 CAPLUS

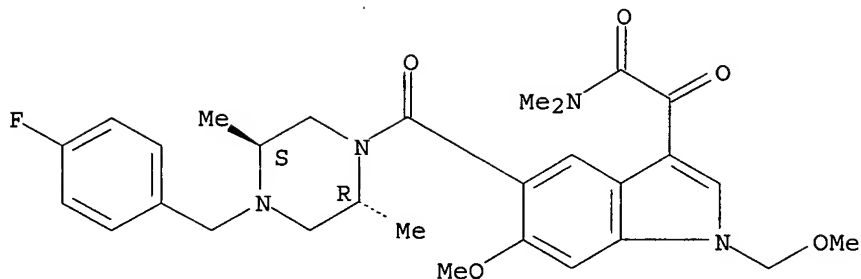
CN 1H-Indole-3-acetamide, 6-chloro-5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



RN 309914-17-8 CAPLUS

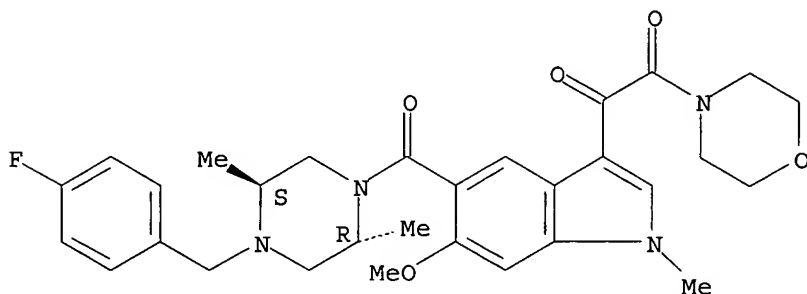
CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1-(methoxymethyl)-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

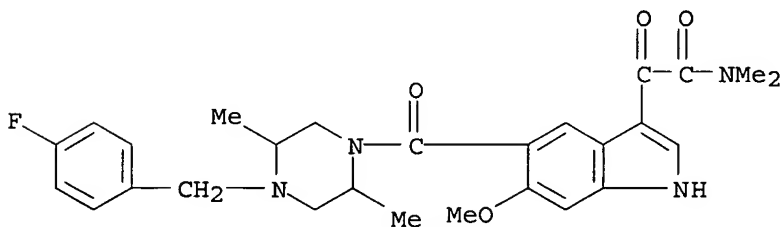


RN 309914-25-8 CAPLUS  
 CN Morpholine, 4-[[5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1-methyl-1H-indol-3-yl]oxoacetyl]- (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.



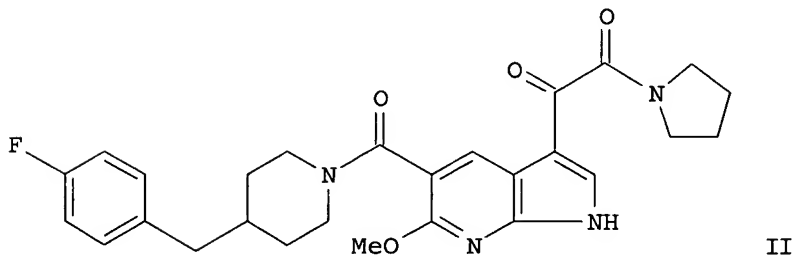
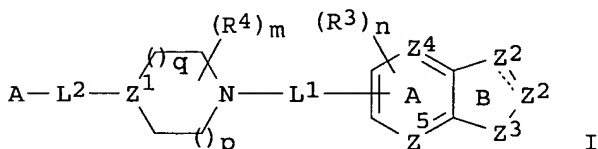
RN 309914-79-2 CAPLUS  
 CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



L24 ANSWER 4 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2004:331941 CAPLUS  
 DOCUMENT NUMBER: 140:339341  
 TITLE: Preparation of azaindole derivatives as inhibitors of p38 kinase  
 INVENTOR(S): Dugar, Sundeep  
 PATENT ASSIGNEE(S): Scios Inc., USA  
 SOURCE: PCT Int. Appl., 70 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

| PATENT NO.                                                                                                                                                                                                                                                                                                                                                                            | KIND | DATE              | APPLICATION NO. | DATE       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------------|-----------------|------------|
| WO 2004032874                                                                                                                                                                                                                                                                                                                                                                         | A2   | 20040422          | WO 2003-US32171 | 20031009   |
| WO 2004032874                                                                                                                                                                                                                                                                                                                                                                         | A3   | 20041028          |                 |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW |      |                   |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG                                                                                                                    |      |                   |                 |            |
| CA 2501947                                                                                                                                                                                                                                                                                                                                                                            | AA   | 20040422          | CA 2003-2501947 | 20031009   |
| EP 1560582                                                                                                                                                                                                                                                                                                                                                                            | A2   | 20050810          | EP 2003-770722  | 20031009   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK                                                                                                                                                                                                                                                         |      |                   |                 |            |
| PRIORITY APPLN. INFO.:                                                                                                                                                                                                                                                                                                                                                                |      |                   | US 2002-417599P | P 20021009 |
|                                                                                                                                                                                                                                                                                                                                                                                       |      |                   | WO 2003-US32171 | W 20031009 |
| OTHER SOURCE(S):                                                                                                                                                                                                                                                                                                                                                                      |      | MARPAT 140:339341 |                 |            |
| GI                                                                                                                                                                                                                                                                                                                                                                                    |      |                   |                 |            |



AB Title compds. I [Z2 = (un)substituted mono/divalent carbon; Z3 = amino, O, S; Z4-5 = N, (un)substituted carbon wherein at least one is N; R3-4 = non-interfering substituent; n = 0-3; L1-2 = linker; m = 0-4; Z1 = (un)substituted carbon, N; p, q = 0-2 wherein the sum is 0-3] are prepared For instance, N-[5-[4-(4-fluorobenzyl)piperidin-1-carbonyl]-6-methoxy-3-((trimethylsilyl)ethynyl)pyridin-2-yl]acetamide (preparation given) is treated with TBAF in THF causing it to cyclize to the pyrrolo[2,3-

b]pyridine. This intermediate is acylated with oxalyl chloride (CH<sub>2</sub>Cl<sub>2</sub>) and acylated with pyrrolidine to give II. II exhibits IC<sub>50</sub> ≤ 1 μM towards p38 kinase. I are useful for the treatment of multiple sclerosis, rheumatoid arthritis, etc.

IT 680208-26-8P 680208-42-8P 680208-44-0P  
680208-46-2P 680208-47-3P 680208-49-5P  
680208-50-8P 680208-72-4P 680208-74-6P  
680208-76-8P 680208-80-4P

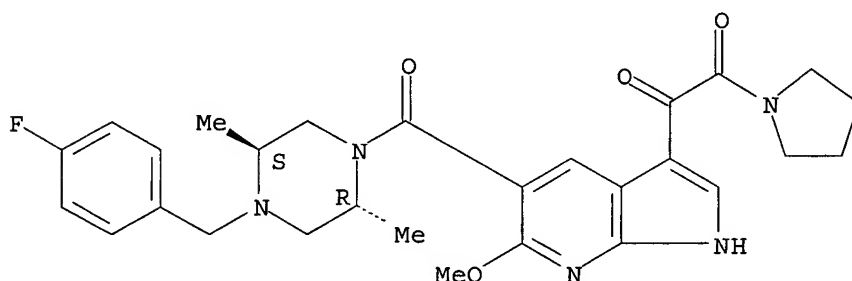
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(azaindole derivs. as inhibitors of p38 kinase)

RN 680208-26-8 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-4-[[6-methoxy-3-(oxo-1-pyrrolidinylacetyl)-1H-pyrrolo[2,3-b]pyridin-5-yl]carbonyl]-2,5-dimethyl-, (2S,5R) - (9CI) (CA INDEX NAME)

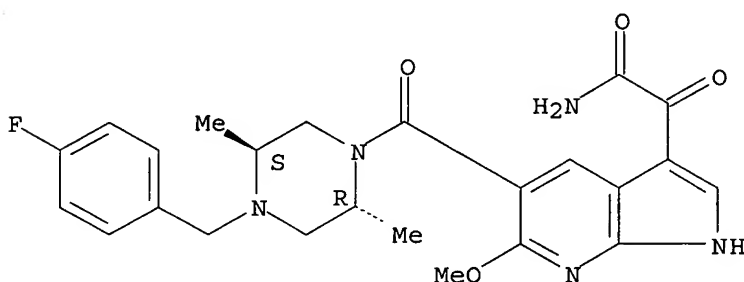
Absolute stereochemistry.



RN 680208-42-8 CAPLUS

CN 1H-Pyrrolo[2,3-b]pyridine-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-α-oxo- (9CI) (CA INDEX NAME)

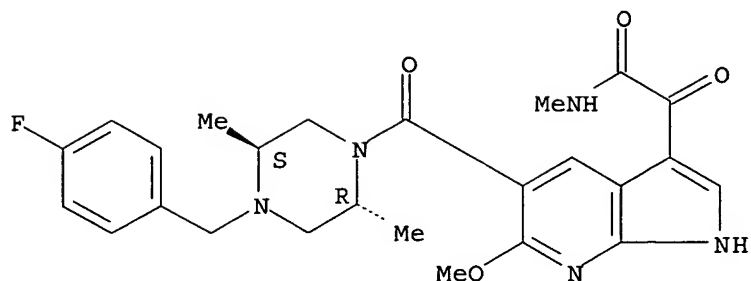
Absolute stereochemistry.



RN 680208-44-0 CAPLUS

CN 1H-Pyrrolo[2,3-b]pyridine-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N-methyl-α-oxo- (9CI) (CA INDEX NAME)

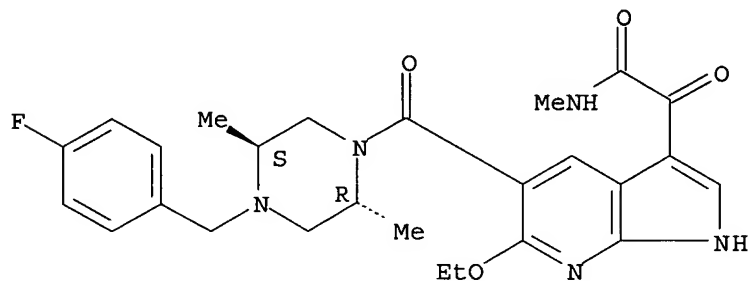
Absolute stereochemistry.



RN 680208-46-2 CAPLUS

CN 1H-Pyrrolo[2,3-b]pyridine-3-acetamide, 6-ethoxy-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N-methyl-α-oxo- (9CI) (CA INDEX NAME)

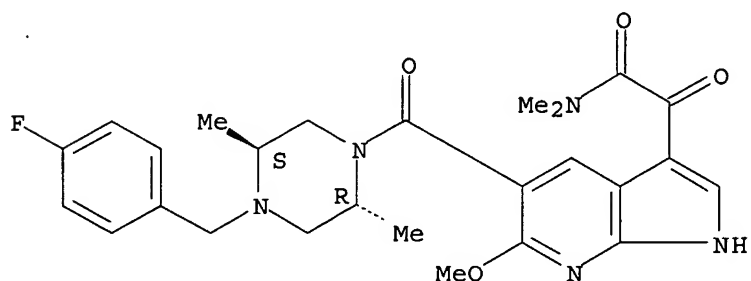
Absolute stereochemistry.



RN 680208-47-3 CAPLUS

CN 1H-Pyrrolo[2,3-b]pyridine-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl-α-oxo- (9CI) (CA INDEX NAME)

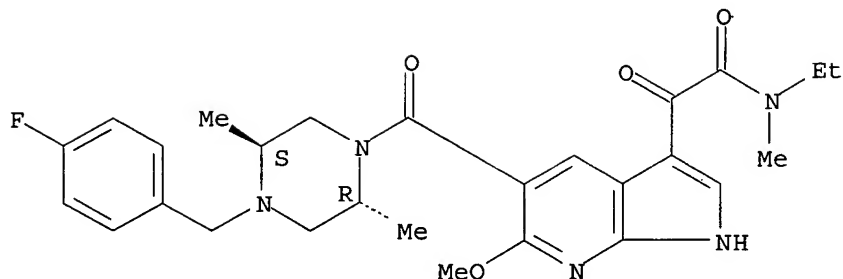
Absolute stereochemistry.



RN 680208-49-5 CAPLUS

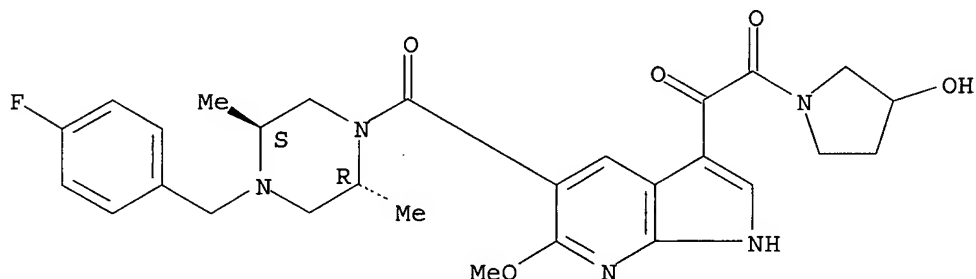
CN 1H-Pyrrolo[2,3-b]pyridine-3-acetamide, N-ethyl-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N-methyl-α-oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



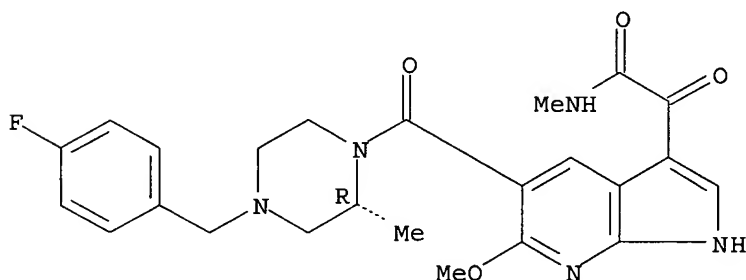
RN 680208-50-8 CAPLUS  
 CN Piperazine, 1-[(4-fluorophenyl)methyl]-4-[[3-[(3-hydroxy-1-pyrrolidinyl)oxoacetyl]-6-methoxy-1H-pyrrolo[2,3-b]pyridin-5-yl]carbonyl]-2,5-dimethyl-, (2S,5R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



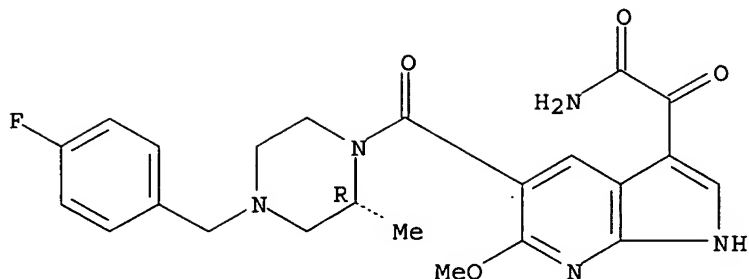
RN 680208-72-4 CAPLUS  
 CN 1H-Pyrrolo[2,3-b]pyridine-3-acetamide, 5-[[[(2R)-4-[(4-fluorophenyl)methyl]-2-methyl-1-piperazinyl]carbonyl]-6-methoxy-N-methyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 680208-74-6 CAPLUS  
 CN 1H-Pyrrolo[2,3-b]pyridine-3-acetamide, 5-[[[(2R)-4-[(4-fluorophenyl)methyl]-2-methyl-1-piperazinyl]carbonyl]-6-methoxy- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

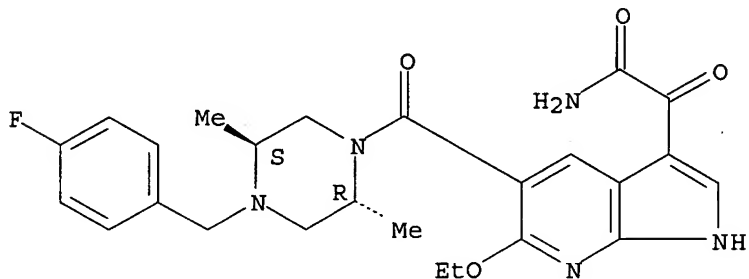
Absolute stereochemistry.



RN 680208-76-8 CAPLUS

CN 1H-Pyrrolo[2,3-b]pyridine-3-acetamide, 6-ethoxy-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-α-oxo-(9CI) (CA INDEX NAME)

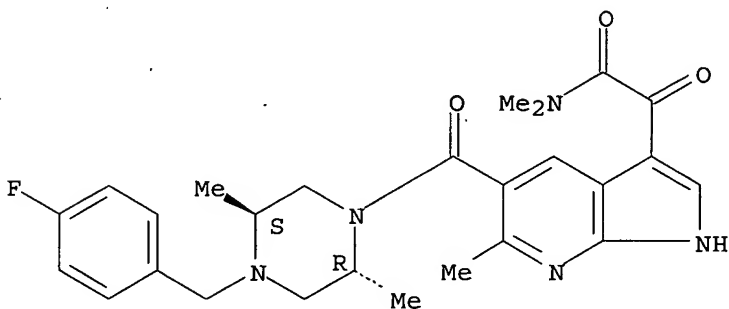
Absolute stereochemistry.



RN 680208-80-4 CAPLUS

CN 1H-Pyrrolo[2,3-b]pyridine-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,6-trimethyl-α-oxo-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L24 ANSWER 5 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:220433 CAPLUS

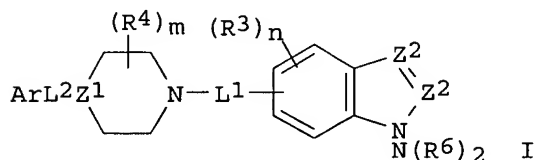
DOCUMENT NUMBER: 140:270879

TITLE: Preparation of piperidinylcarbonyl- and piperazinylcarbonylindolamines as p38 kinase inhibitors.

INVENTOR(S): Chakravarty, Sarvajit; Dugar, Sundeep; Lu, Qing;

Luedtke, Gregory R.; Mavunkel, Babu J.; Perumatam,  
 John Joseph; Tester, Richland  
 PATENT ASSIGNEE(S): Scios Inc., USA  
 SOURCE: PCT Int. Appl., 117 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | KIND | DATE     | APPLICATION NO. | DATE     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------|----------|
| WO 2004022712                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A2   | 20040318 | WO 2003-US27761 | 20030903 |
| WO 2004022712                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | A3   | 20040429 |                 |          |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,<br>CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,<br>GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,<br>LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,<br>PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN,<br>TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,<br>KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,<br>FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,<br>BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG<br>CA 2497408 AA 20040318 CA 2003-2497408 20030903<br>US 2004142940 A1 20040722 US 2003-654840 20030903<br>EP 1545528 A2 20050629 EP 2003-749429 20030903<br>R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,<br>IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK<br>PRIORITY APPLN. INFO.: US 2002-408493P P 20020903<br>WO 2003-US27761 W 20030903<br>OTHER SOURCE(S): MARPAT 140:270879<br>GI |      |          |                 |          |



AB Title compds. [I; 1 Z2 = CA, the other = CR1; R1, R2, R5, R6 = H,  
 noninterfering substituent; A = WiCOXjY; Y = COR2; W, X = spacer of  
 2-6Å; i, j = 0, 1; 2 R6 may form a 5-6 membered ring; m = 0-4; n =  
 0-3; L1, L2 = linker; R4 = noninterfering substituent; Z1 = N, CR5; Ar =  
 (substituted) Ph, thienyl], were prepared for treatment of  
 pro-inflammation response (no data). Thus, 1-(4-fluorobenzyl)-2S,5R-  
 dimethylpiperazine, 6-chloroindole-5-carboxylic acid (preparation given), TBTU,  
 and Et3N were stirred in DMF overnight to give 92% amide, which in CH2Cl2  
 at 0° was treated with (COCl)<sub>2</sub> followed by stirring at room temperature  
 for 5 h. Pyrrolidine was added followed by stirring for 1 h to give 71%  
 1-[6-chloro-5-[4-(4-fluorobenzyl)-2R,5S-dimethylpiperazine-1-carbonyl]-1H-  
 indol-3-yl]-2-pyrrolidin-1-ylethane-1,2-dione. This was stirred with NaH  
 in THF for 30 min.; O-(diphenylphosphinyl)hydroxylamine was added followed



by stirring for 10 h to give 1-[1-amino-6-chloro-5-[4-(4-fluorobenzyl)-2R,5S-dimethylpiperazine-1-carbonyl]-1H-indol-3-yl]-2-pyrrolidin-1-ylethane-1,2-dione.

IT 672292-45-4P 672292-46-5P 672292-47-6P  
672292-48-7P 672292-49-8P 672292-50-1P  
672292-53-4P 672292-54-5P 672292-55-6P  
672292-56-7P 672292-57-8P 672292-58-9P  
672292-59-0P 672292-60-3P 672292-61-4P  
672292-62-5P 672292-63-6P 672292-64-7P  
672292-65-8P 672292-66-9P 672292-67-0P  
672292-68-1P 672292-69-2P 672292-70-5P  
672292-71-6P 672292-72-7P 672292-87-4P  
672292-88-5P 672292-89-6P 672292-90-9P  
672292-91-0P 672292-94-3P 672292-95-4P  
672292-96-5P

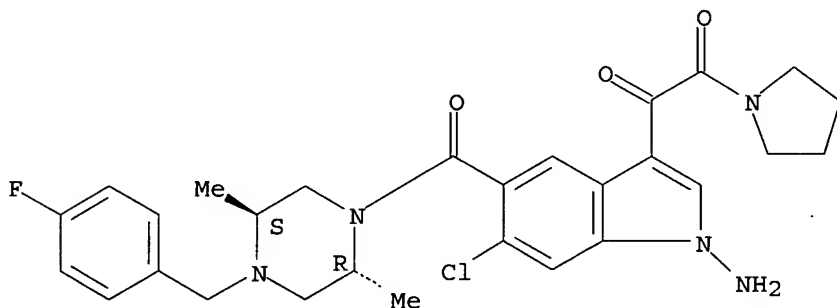
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of piperidinylcarbonyl- and piperazinylcarbonylindolamines as p38 kinase inhibitors)

RN 672292-45-4 CAPLUS

CN Piperazine, 1-[[1-amino-6-chloro-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

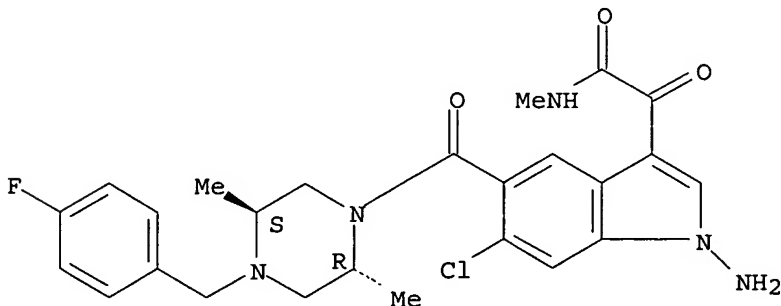
Absolute stereochemistry.



RN 672292-46-5 CAPLUS

CN 1H-Indole-3-acetamide, 1-amino-6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N-methyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

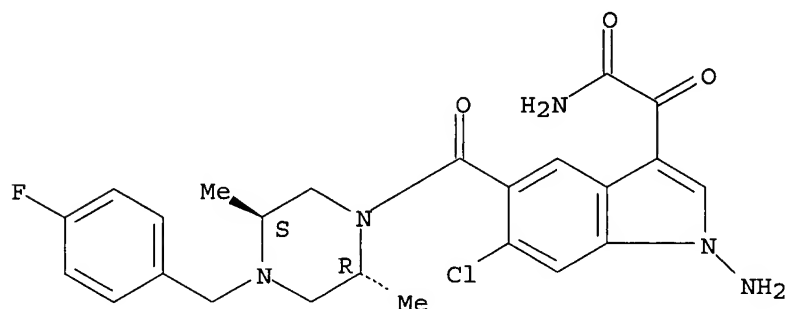
Absolute stereochemistry.



RN 672292-47-6 CAPLUS

CN 1H-Indole-3-acetamide, 1-amino-6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]- $\alpha$ -oxo-  
(9CI) (CA INDEX NAME)

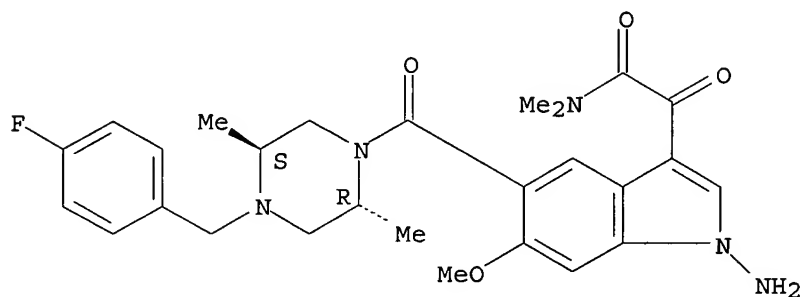
Absolute stereochemistry.



RN 672292-48-7 CAPLUS

CN 1H-Indole-3-acetamide, 1-amino-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI)  
(CA INDEX NAME)

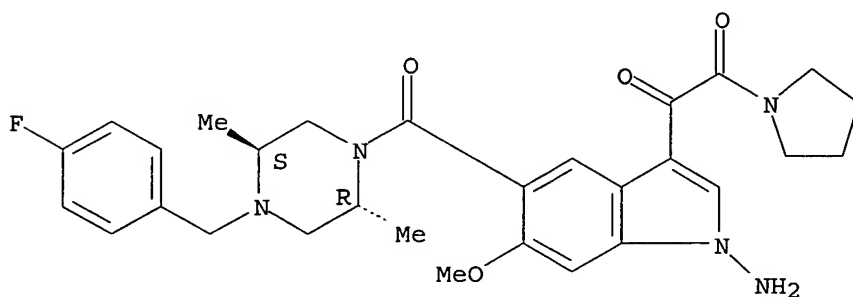
Absolute stereochemistry.



RN 672292-49-8 CAPLUS

CN Piperazine, 1-[[[1-amino-6-methoxy-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

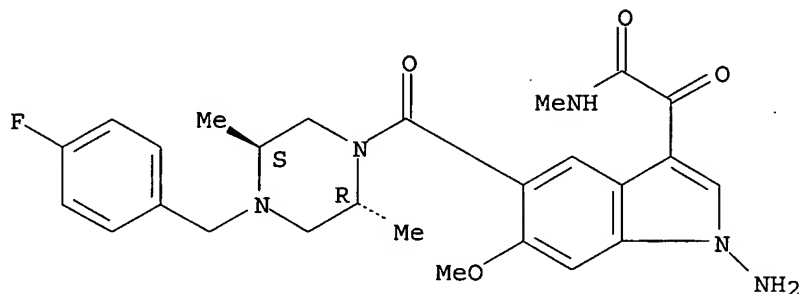
Absolute stereochemistry.



RN 672292-50-1 CAPLUS

CN 1H-Indole-3-acetamide, 1-amino-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N-methyl- $\alpha$ -oxo- (9CI)  
(CA INDEX NAME)

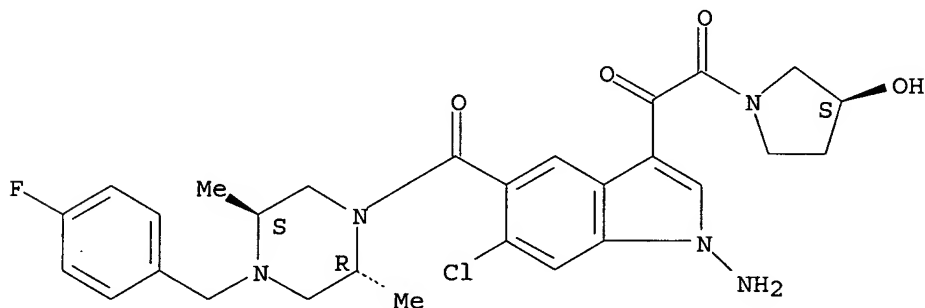
Absolute stereochemistry.



RN 672292-53-4 CAPLUS

CN Piperazine, 1-[[[1-amino-6-chloro-3-[[[(3S)-3-hydroxy-1-pyrrolidinyl]oxoacetyl]-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

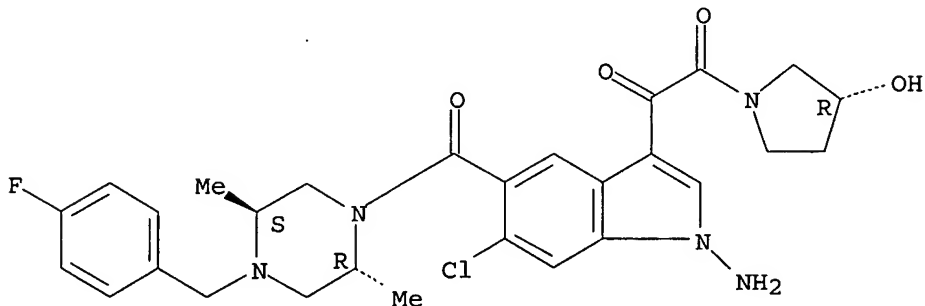
Absolute stereochemistry.



RN 672292-54-5 CAPLUS

CN Piperazine, 1-[[[1-amino-6-chloro-3-[[[(3R)-3-hydroxy-1-pyrrolidinyl]oxoacetyl]-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

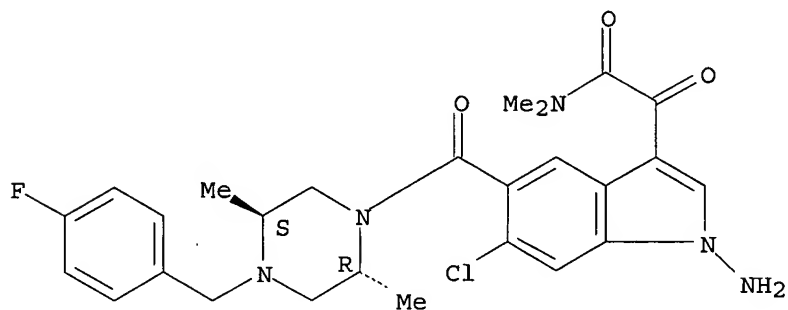
Absolute stereochemistry.



RN 672292-55-6 CAPLUS

CN 1H-Indole-3-acetamide, 1-amino-6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

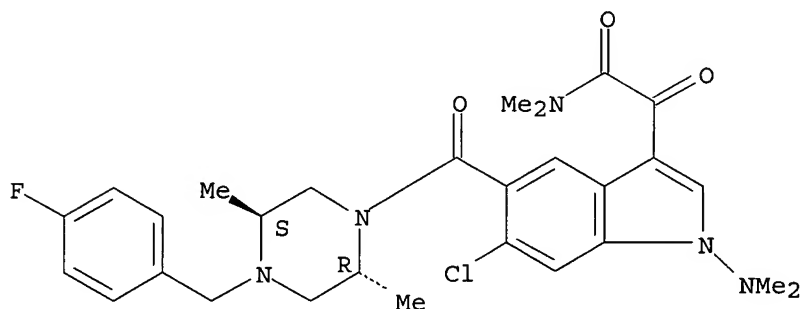
Absolute stereochemistry.



RN 672292-56-7 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-1-(dimethylamino)-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

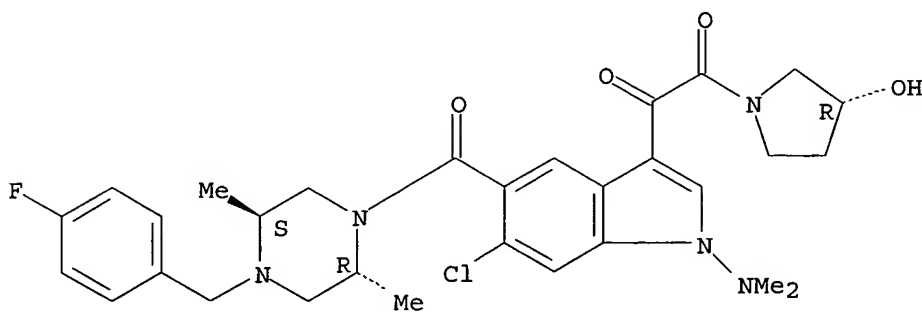
Absolute stereochemistry.



RN 672292-57-8 CAPLUS

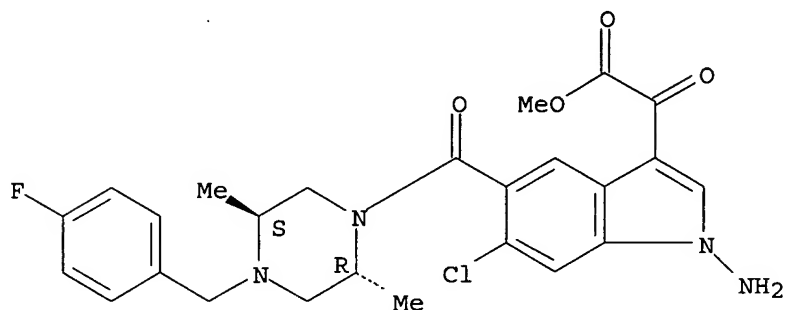
CN Piperazine, 1-[[[6-chloro-1-(dimethylamino)-3-[[[(3R)-3-hydroxy-1-pyrrolidinyl]oxoacetyl]-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



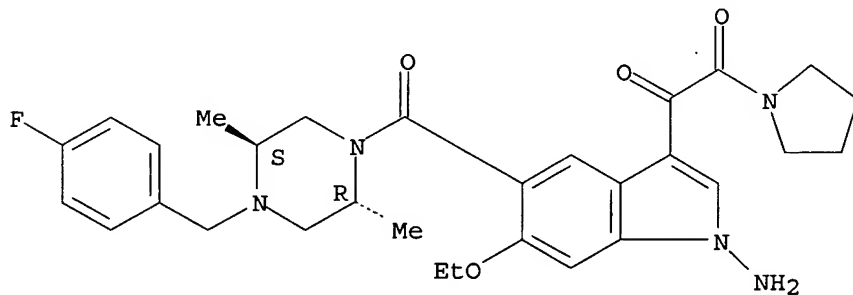
RN 672292-58-9 CAPLUS  
CN 1H-Indole-3-acetic acid, 1-amino-6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]- $\alpha$ -oxo-, methyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



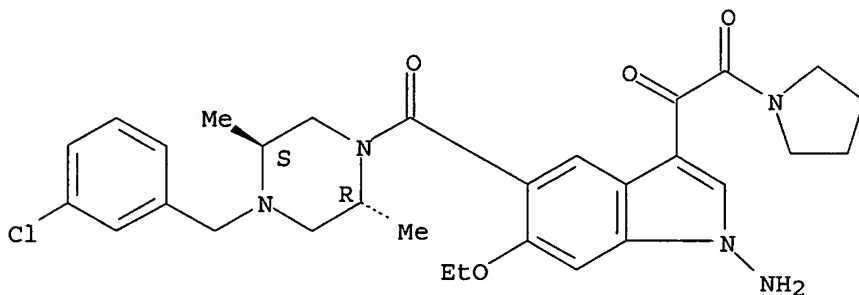
RN 672292-59-0 CAPLUS  
CN Piperazine, 1-[[[1-amino-6-ethoxy-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



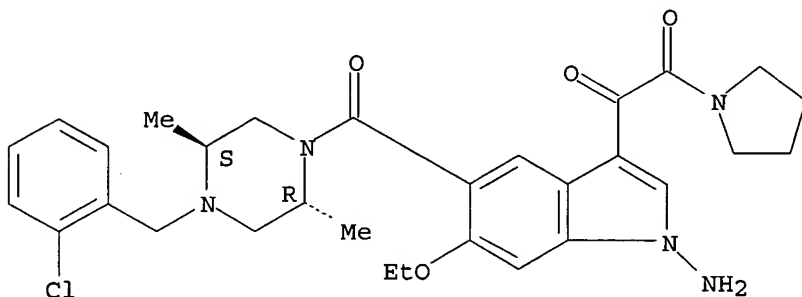
RN 672292-60-3 CAPLUS  
CN Piperazine, 1-[[[1-amino-6-ethoxy-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(3-chlorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



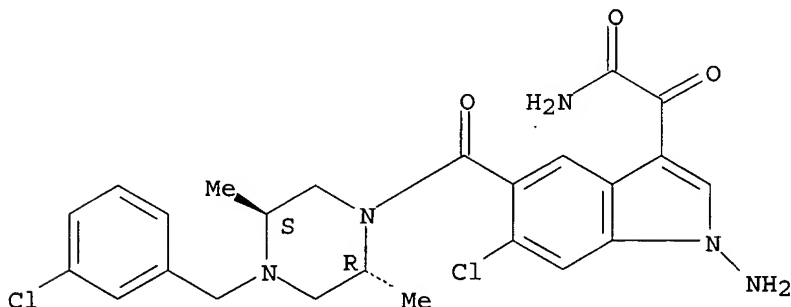
RN 672292-61-4 CAPLUS  
 CN Piperazine, 1-[[1-amino-6-ethoxy-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(2-chlorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



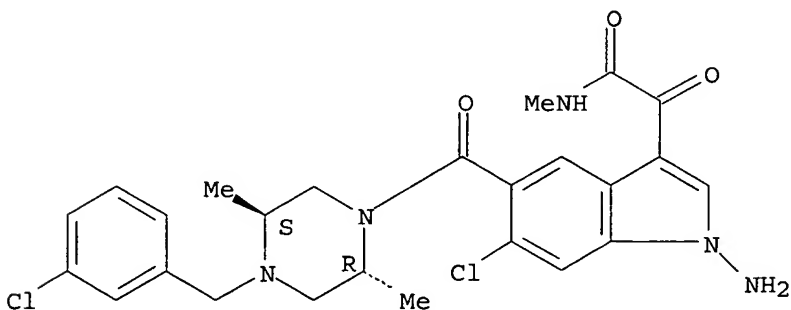
RN 672292-62-5 CAPLUS  
 CN 1H-Indole-3-acetamide, 1-amino-6-chloro-5-[[[(2R,5S)-4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 672292-63-6 CAPLUS  
 CN 1H-Indole-3-acetamide, 1-amino-6-chloro-5-[[[(2R,5S)-4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N-methyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

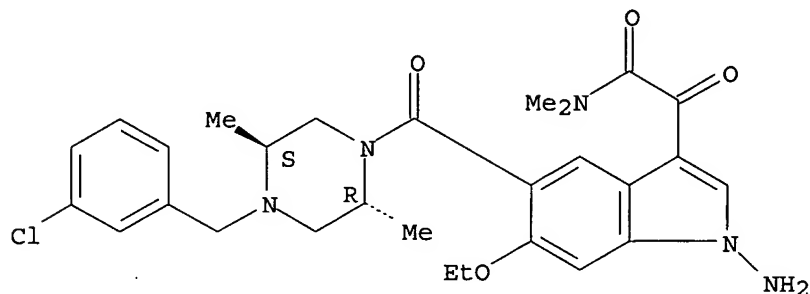
Absolute stereochemistry.



RN 672292-64-7 CAPLUS

CN 1H-Indole-3-acetamide, 1-amino-5-[[[(2R,5S)-4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-ethoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI)  
(CA INDEX NAME)

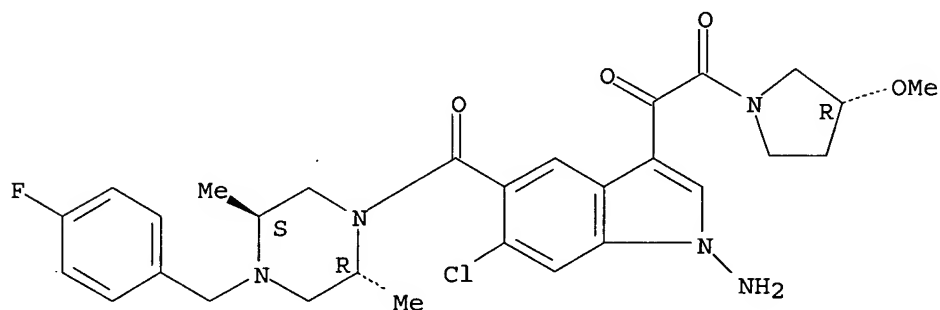
Absolute stereochemistry.



RN 672292-65-8 CAPLUS

CN Piperazine, 1-[[[1-amino-6-chloro-3-[[[(3R)-3-methoxy-1-pyrrolidinyl]oxoacetyl]-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

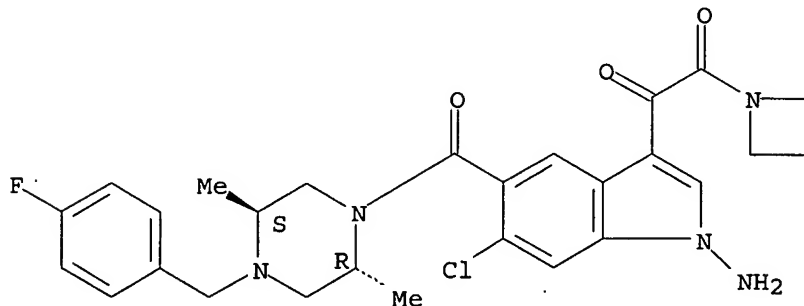
Absolute stereochemistry.



RN 672292-66-9 CAPLUS

CN Piperazine, 1-[[[1-amino-3-(1-azetidinyloxoacetyl)-6-chloro-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

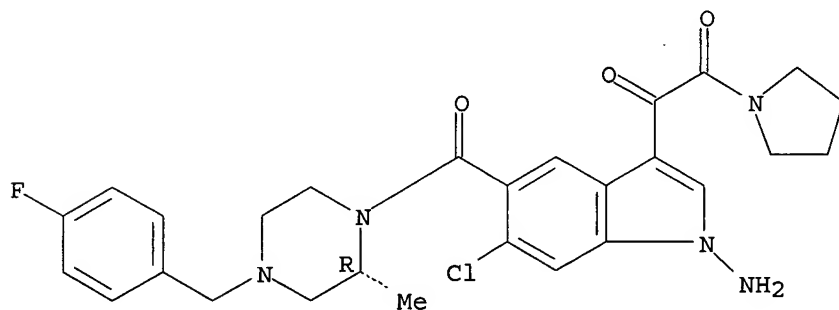
Absolute stereochemistry.



RN 672292-67-0 CAPLUS

CN Piperazine, 1-[[1-amino-6-chloro-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2-methyl-, (2R)- (9CI) (CA INDEX NAME)

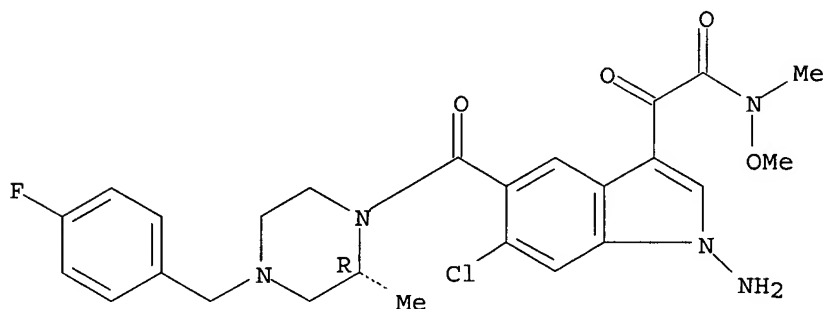
Absolute stereochemistry.



RN 672292-68-1 CAPLUS

CN 1H-Indole-3-acetamide, 1-amino-6-chloro-5-[[[(2R)-4-[(4-fluorophenyl)methyl]-2-methyl-1-piperazinyl]carbonyl]-N-methoxy-N-methyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

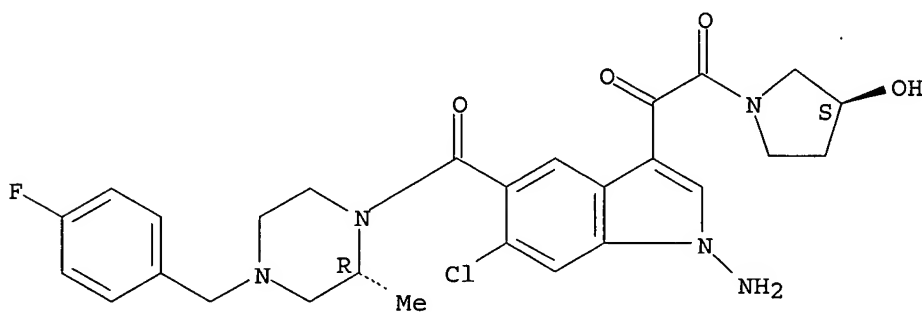
Absolute stereochemistry.



RN 672292-69-2 CAPLUS

CN Piperazine, 1-[[1-amino-6-chloro-3-[(3R)-3-hydroxy-1-pyrrolidinyl]oxoacetyl]-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2-methyl-, (2R)- (9CI) (CA INDEX NAME)

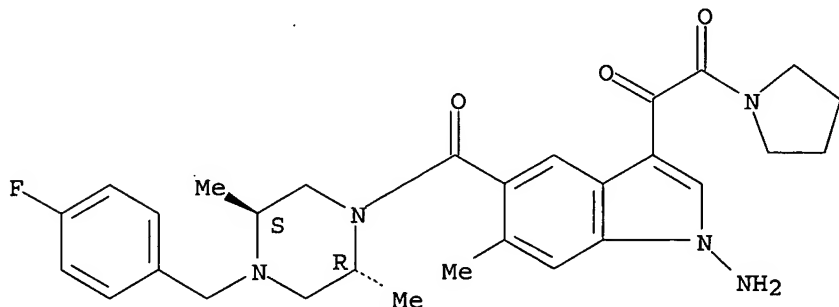
Absolute stereochemistry.





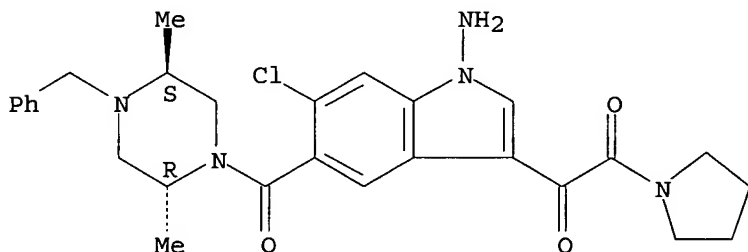
RN 672292-70-5 CAPLUS  
 CN Piperazine, 1-[[1-amino-6-methyl-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



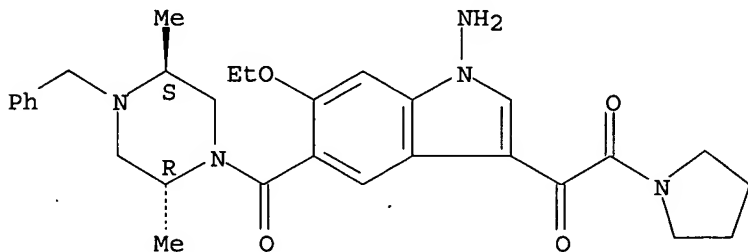
RN 672292-71-6 CAPLUS  
 CN Piperazine, 1-[[1-amino-6-chloro-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-2,5-dimethyl-4-(phenylmethyl)-, (2R,5S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 672292-72-7 CAPLUS  
 CN Piperazine, 1-[[1-amino-6-ethoxy-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-2,5-dimethyl-4-(phenylmethyl)-, (2R,5S)- (9CI) (CA INDEX NAME)

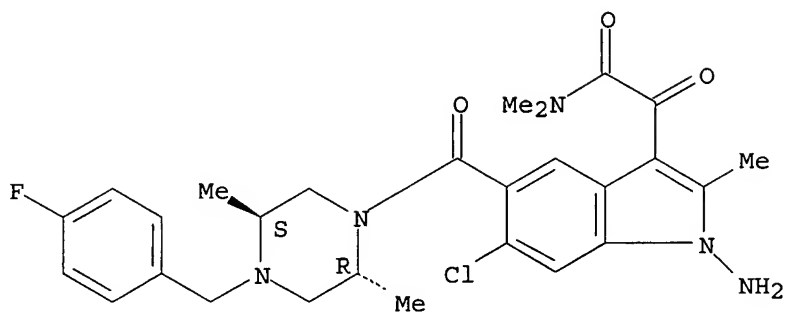
Absolute stereochemistry.



RN 672292-87-4 CAPLUS  
 CN 1H-Indole-3-acetamide, 1-amino-6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,2-trimethyl-

$\alpha$ -oxo- (9CI) (CA INDEX NAME)

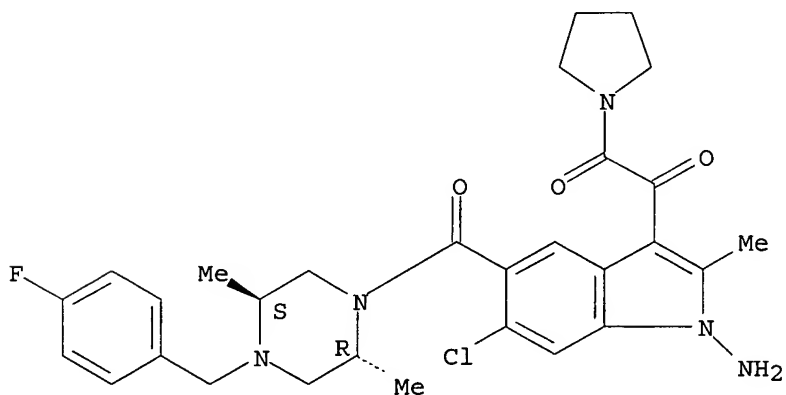
Absolute stereochemistry.



RN 672292-88-5 CAPLUS

CN Piperazine, 1-[[1-amino-6-chloro-2-methyl-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

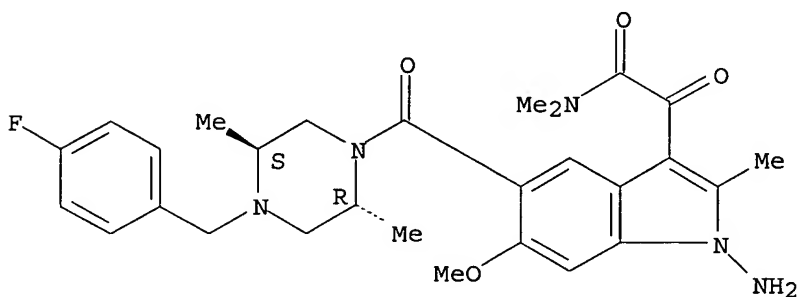
Absolute stereochemistry.



RN 672292-89-6 CAPLUS

CN 1H-Indole-3-acetamide, 1-amino-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,2-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

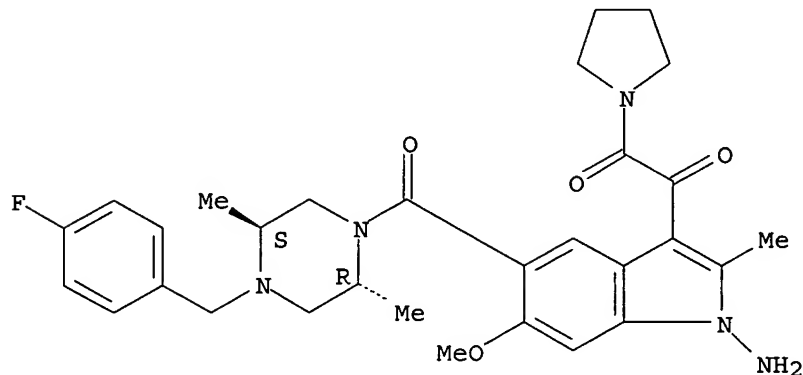
Absolute stereochemistry.



RN 672292-90-9 CAPLUS

CN Piperazine, 1-[[1-amino-6-methoxy-2-methyl-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)-(9CI) (CA INDEX NAME)

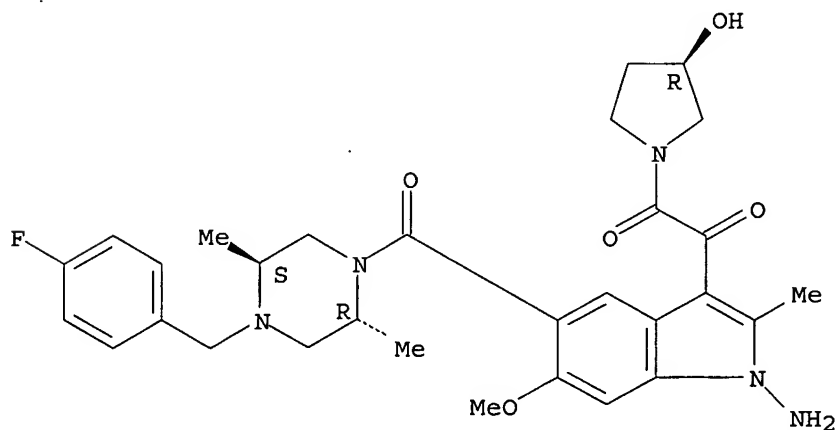
Absolute stereochemistry.



RN 672292-91-0 CAPLUS

CN Piperazine, 1-[[1-amino-3-[[[(3R)-3-hydroxy-1-pyrrolidinyl]oxoacetyl]-6-methoxy-2-methyl-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)-(9CI) (CA INDEX NAME)

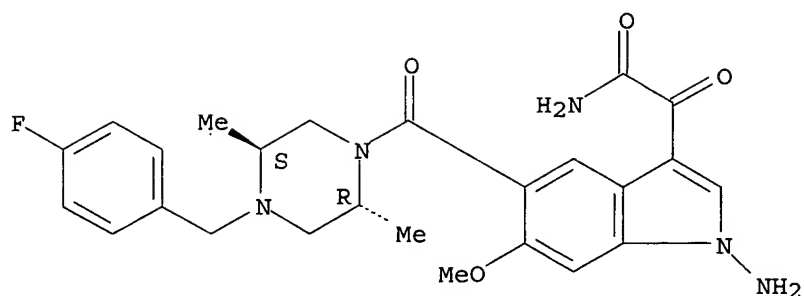
Absolute stereochemistry.



RN 672292-94-3 CAPLUS

CN 1H-Indole-3-acetamide, 1-amino-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

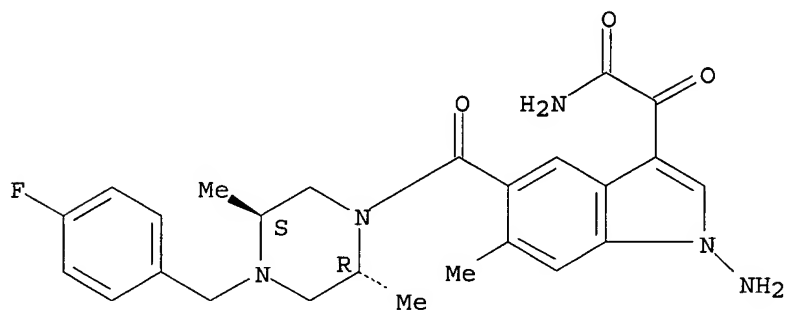
Absolute stereochemistry.



RN 672292-95-4 CAPLUS

CN 1H-Indole-3-acetamide, 1-amino-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

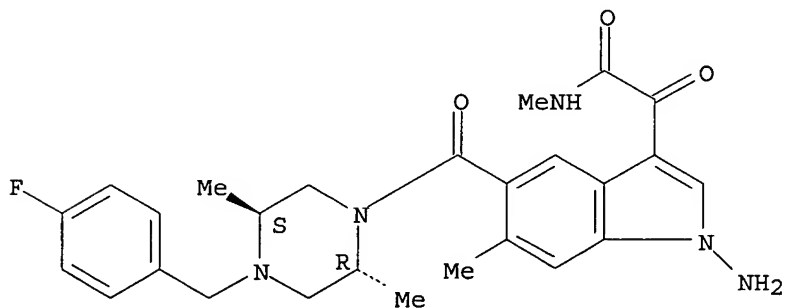
Absolute stereochemistry.



RN 672292-96-5 CAPLUS

CN 1H-Indole-3-acetamide, 1-amino-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,6-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 672293-00-4P 672293-01-5P 672293-02-6P  
 672293-04-8P 672293-05-9P 672293-08-2P  
 672293-09-3P 672293-10-6P 672293-13-9P  
 672293-20-8P 672293-22-0P 672293-23-1P  
 672293-24-2P 672293-25-3P 672293-27-5P  
 672293-28-6P 672293-30-0P 672293-31-1P

672293-32-2P 672293-41-3P 672293-43-5P  
 672293-74-2P 672293-75-3P 672293-79-7P  
 672293-80-0P 672293-82-2P 672293-85-5P  
 672293-86-6P 672293-87-7P

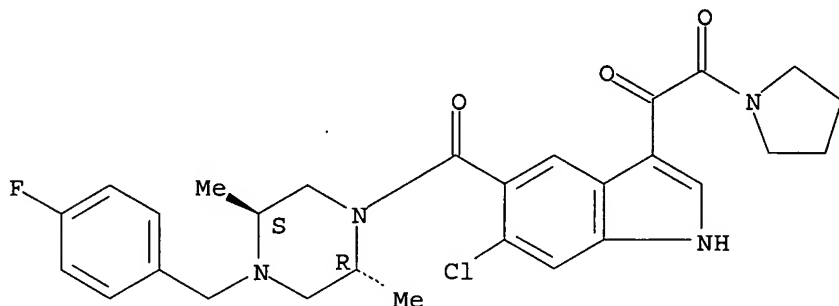
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)

(preparation of piperidinylcarbonyl- and piperazinylcarbonylindolamines as  
 p38 kinase inhibitors)

RN 672293-00-4 CAPLUS

CN Piperazine, 1-[[6-chloro-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-  
 yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA  
 INDEX NAME)

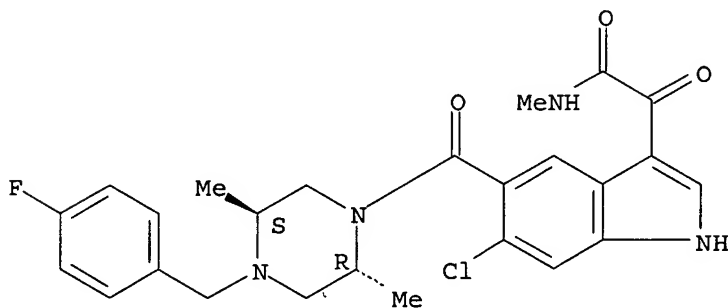
Absolute stereochemistry.



RN 672293-01-5 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-  
 dimethyl-1-piperazinyl]carbonyl]-N-methyl- $\alpha$ -oxo- (9CI) (CA INDEX  
 NAME)

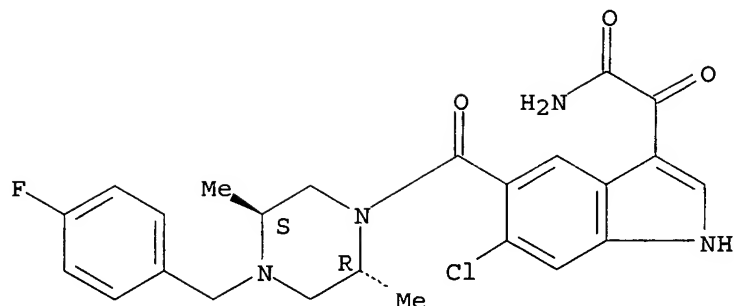
Absolute stereochemistry.



RN 672293-02-6 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-  
 dimethyl-1-piperazinyl]carbonyl]- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

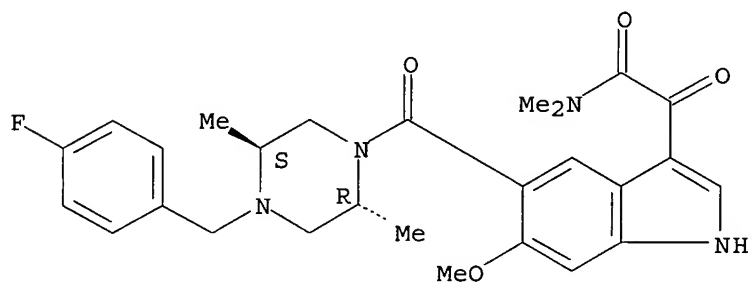
Absolute stereochemistry.



RN 672293-04-8 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl-α-oxo- (9CI) (CA INDEX NAME)

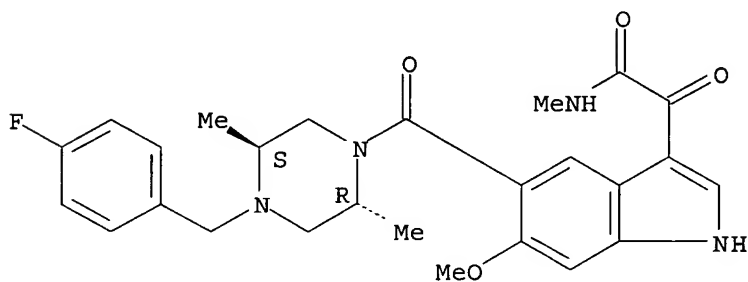
Absolute stereochemistry.



RN 672293-05-9 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N-methyl-α-oxo- (9CI) (CA INDEX NAME)

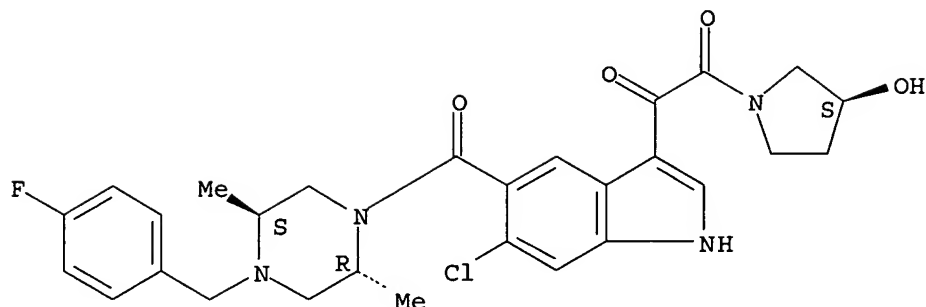
Absolute stereochemistry.



RN 672293-08-2 CAPLUS

CN Piperazine, 1-[[[6-chloro-3-[(3S)-3-hydroxy-1-pyrrolidinyl]oxoacetyl]-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

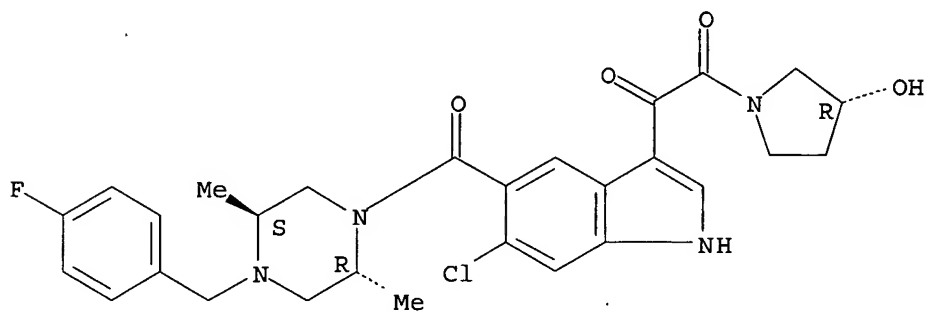
Absolute stereochemistry.



RN 672293-09-3 CAPLUS

CN Piperazine, 1-[[6-chloro-3-[[[(3R)-3-hydroxy-1-pyrrolidinyl]oxoacetyl]-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)-(9CI) (CA INDEX NAME)

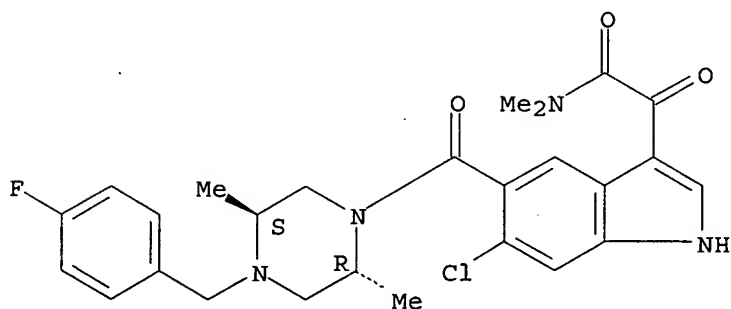
Absolute stereochemistry.



RN 672293-10-6 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl-α-oxo-1-pyrrolidinyl]oxoacetyl-, (2R,5S)-(9CI) (CA INDEX NAME)

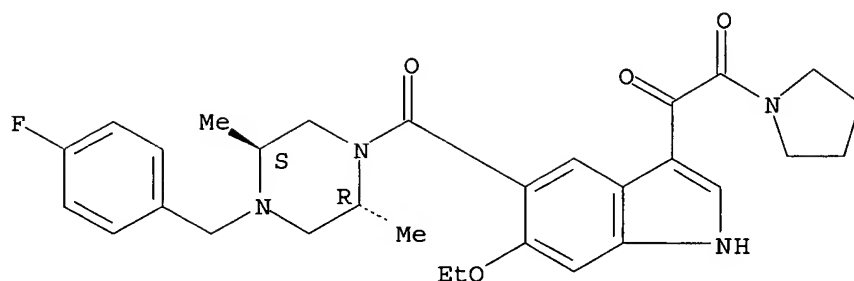
Absolute stereochemistry.



RN 672293-13-9 CAPLUS

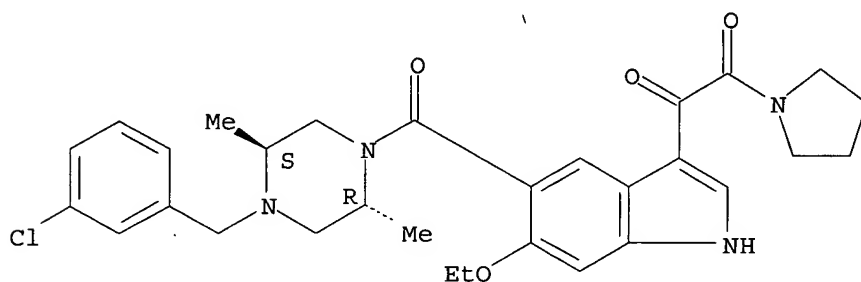
CN Piperazine, 1-[[6-ethoxy-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



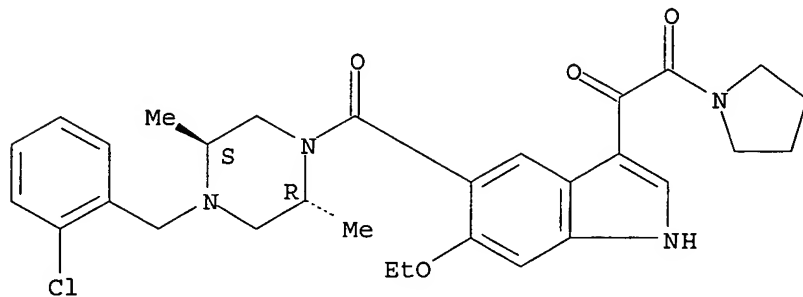
RN 672293-20-8 CAPLUS  
 CN Piperazine, 1-[(3-chlorophenyl)methyl]-4-[[6-ethoxy-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-2,5-dimethyl-, (2S,5R)- (9CI)  
 (CA INDEX NAME)

Absolute stereochemistry.



RN 672293-22-0 CAPLUS  
 CN Piperazine, 1-[(2-chlorophenyl)methyl]-4-[[6-ethoxy-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-2,5-dimethyl-, (2S,5R)- (9CI)  
 (CA INDEX NAME)

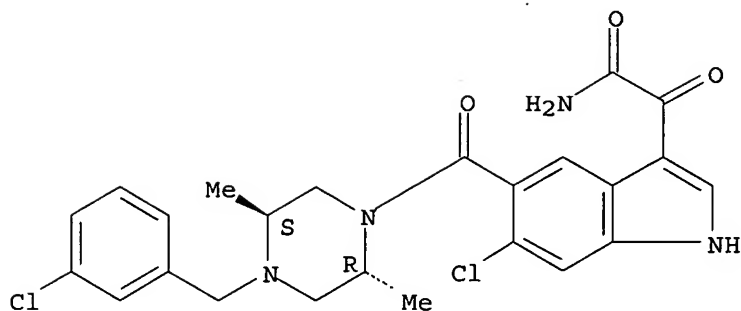
Absolute stereochemistry.



RN 672293-23-1 CAPLUS  
 CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-α-oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

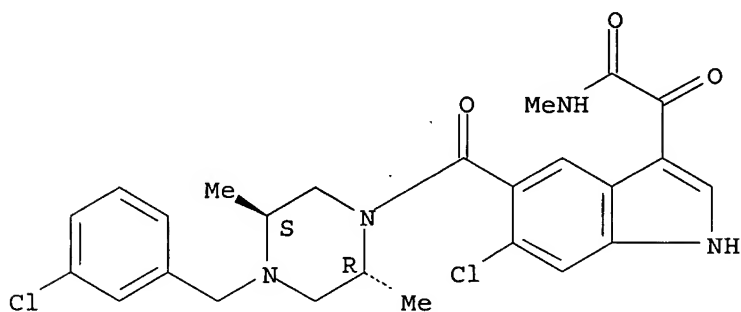




RN 672293-24-2 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N-methyl-α-oxo- (9CI) (CA INDEX NAME)

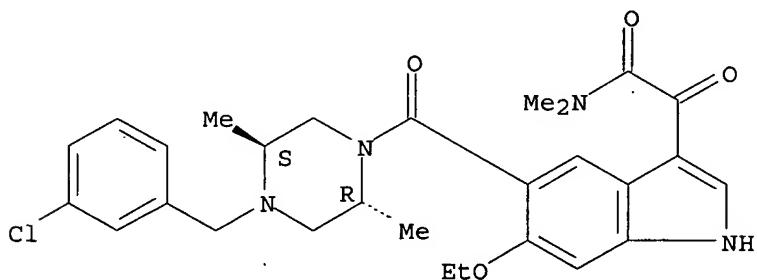
Absolute stereochemistry.



RN 672293-25-3 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-ethoxy-N,N-dimethyl-α-oxo- (9CI) (CA INDEX NAME)

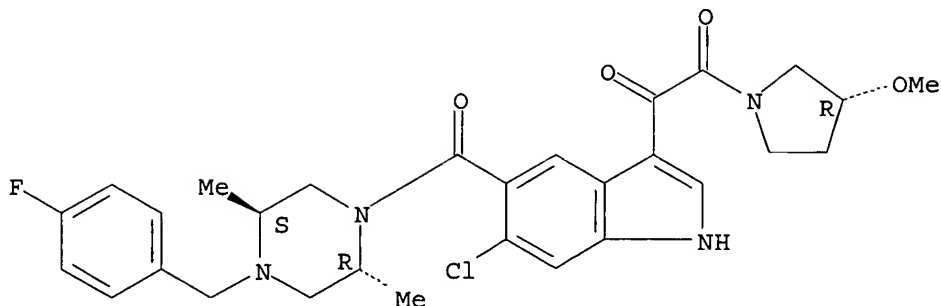
Absolute stereochemistry.



RN 672293-27-5 CAPLUS

CN Piperazine, 1-[[[6-chloro-3-[[[(3R)-3-methoxy-1-pyrrolidinyl]oxoacetyl]-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

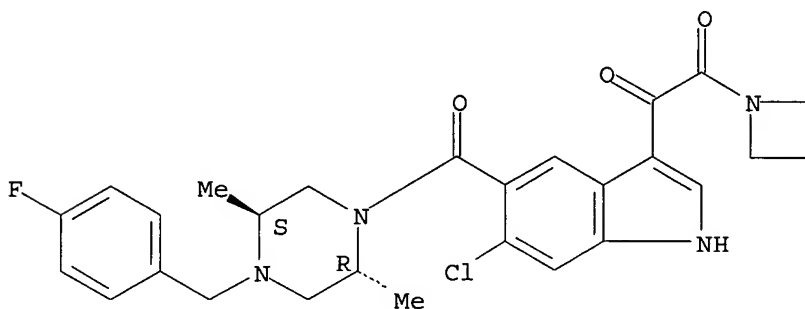
Absolute stereochemistry.



RN 672293-28-6 CAPLUS

CN Piperazine, 1-[[3-(1-azetidinyloxyacetyl)-6-chloro-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

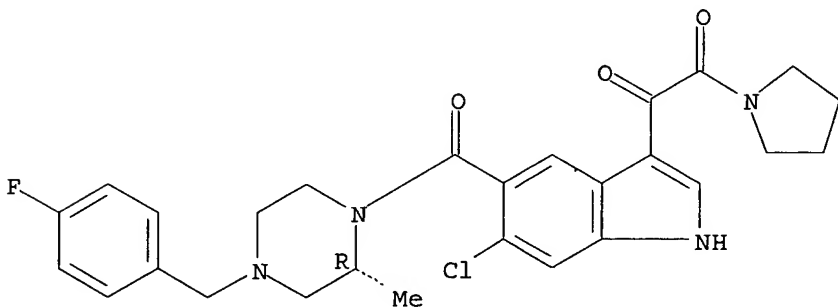
Absolute stereochemistry.



RN 672293-30-0 CAPLUS

CN Piperazine, 1-[[6-chloro-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2-methyl-, (2R)- (9CI) (CA INDEX NAME)

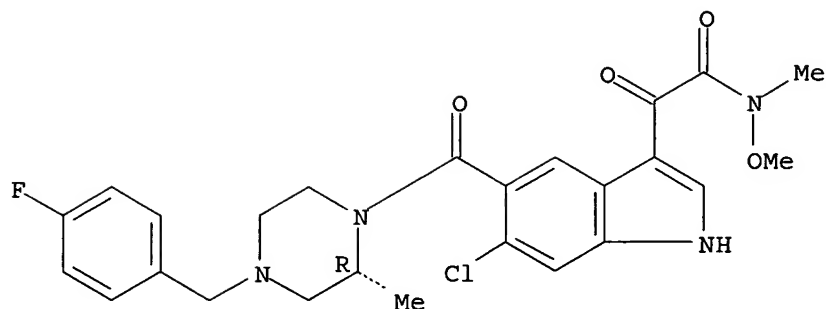
Absolute stereochemistry.



RN 672293-31-1 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R)-4-[(4-fluorophenyl)methyl]-2-methyl-1-piperazinyl]carbonyl]-N-methoxy-N-methyl-α-oxo-, (9CI) (CA INDEX NAME)

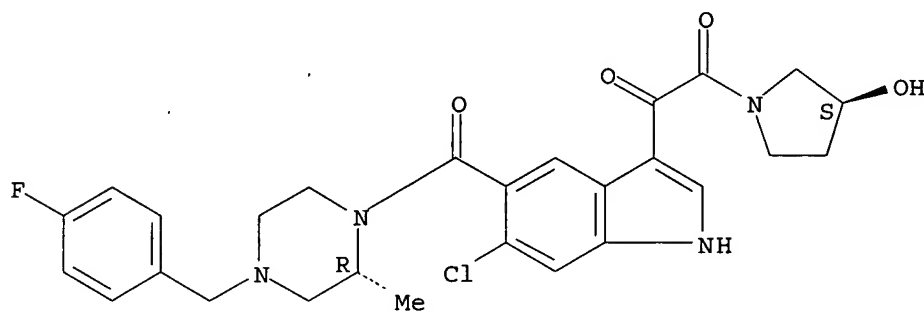
Absolute stereochemistry.



RN 672293-32-2 CAPLUS

CN Piperazine, 1-[[6-chloro-3-[[[(3S)-3-hydroxy-1-pyrrolidinyl]oxoacetyl]-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2-methyl-, (2R)- (9CI)  
(CA INDEX NAME)

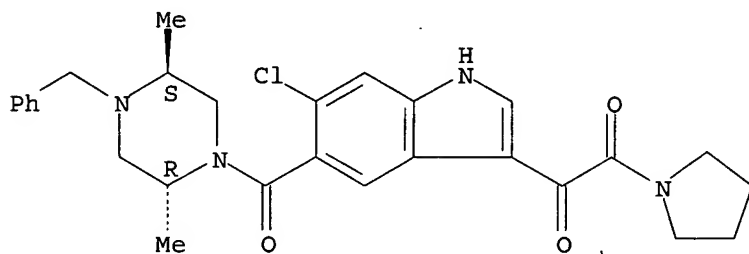
Absolute stereochemistry.



RN 672293-41-3 CAPLUS

CN Piperazine, 1-[[6-chloro-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-2,5-dimethyl-4-(phenylmethyl)-, (2R,5S)- (9CI) (CA INDEX NAME)

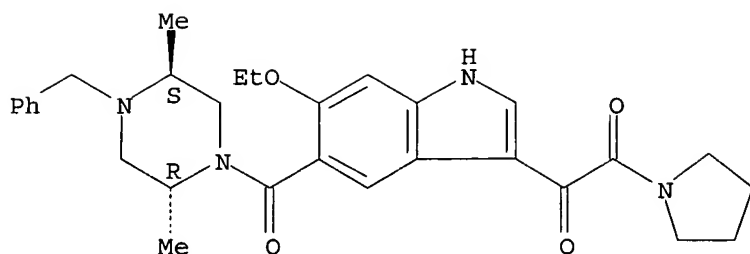
Absolute stereochemistry.



RN 672293-43-5 CAPLUS

CN Piperazine, 1-[[6-ethoxy-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-2,5-dimethyl-4-(phenylmethyl)-, (2R,5S)- (9CI) (CA INDEX NAME)

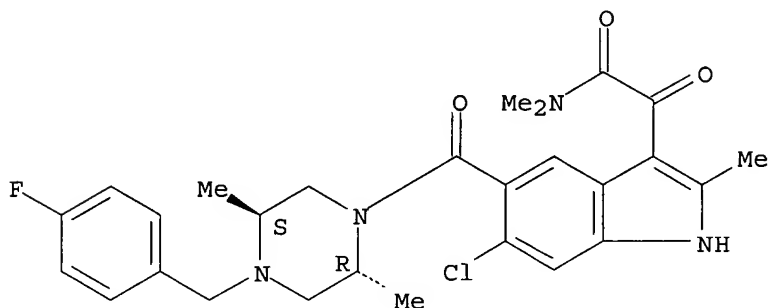
Absolute stereochemistry.



RN 672293-74-2 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,2-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

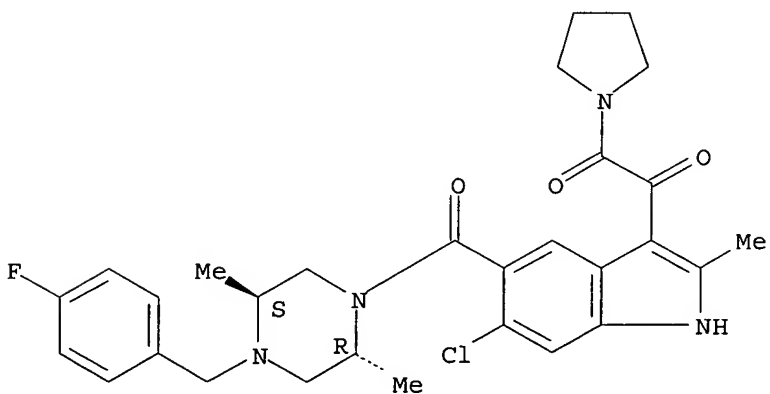
Absolute stereochemistry.



RN 672293-75-3 CAPLUS

CN Piperazine, 1-[[[6-chloro-2-methyl-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)- (9CI) (CA INDEX NAME)

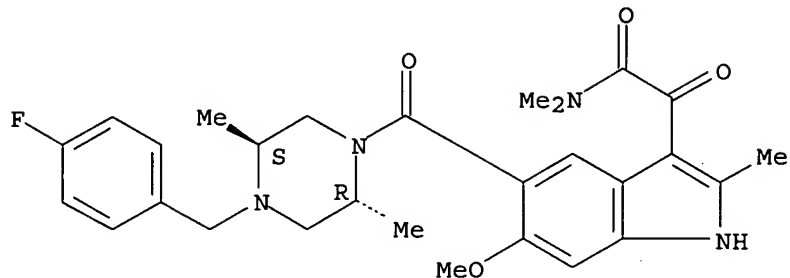
Absolute stereochemistry.



RN 672293-79-7 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,2-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

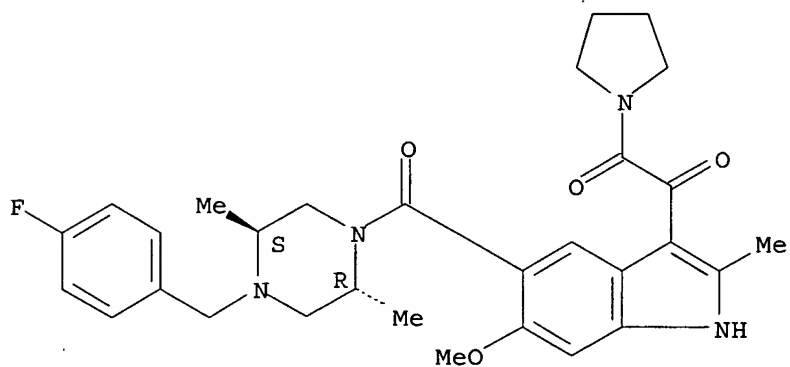
Absolute stereochemistry.



RN 672293-80-0 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-4-[[6-methoxy-2-methyl-3-(oxo-1-pyrrolidinylacetyl)-1H-indol-5-yl]carbonyl]-2,5-dimethyl-, (2S,5R)- (9CI)  
(CA INDEX NAME)

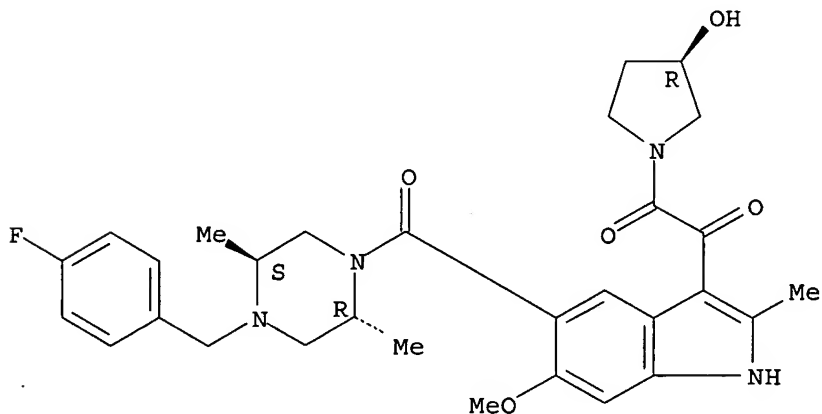
Absolute stereochemistry.



RN 672293-82-2 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-4-[[3-[[3-[(3R)-3-hydroxy-1-pyrrolidinyl]oxoacetyl]-6-methoxy-2-methyl-1H-indol-5-yl]carbonyl]-2,5-dimethyl-, (2S,5R)- (9CI) (CA INDEX NAME)

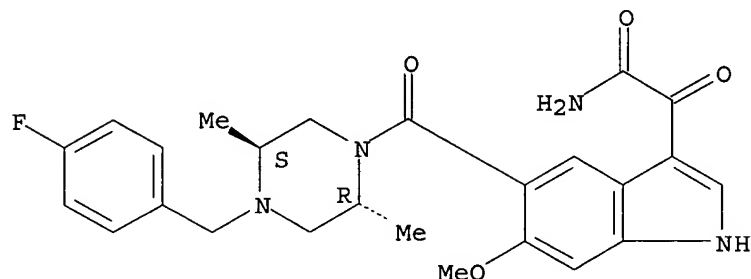
Absolute stereochemistry.



RN 672293-85-5 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

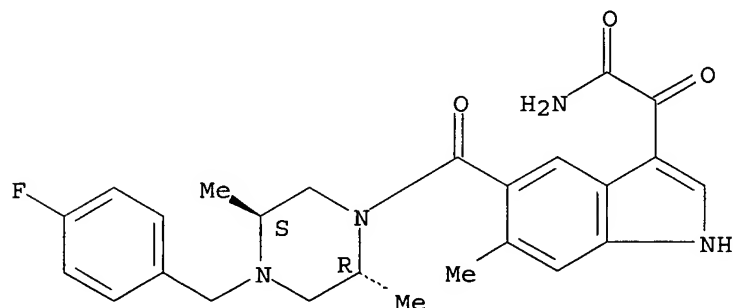
Absolute stereochemistry.



RN 672293-86-6 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

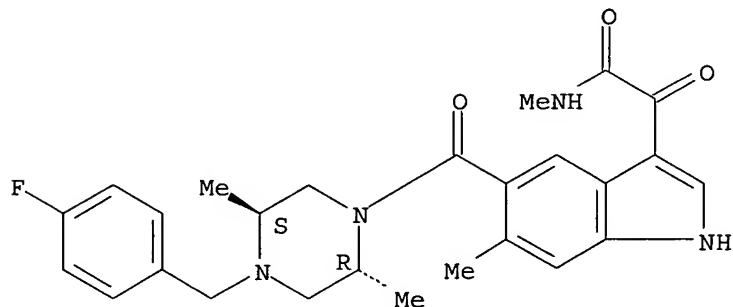
Absolute stereochemistry.



RN 672293-87-7 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,6-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L24 ANSWER 6 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN  
ACCESSION NUMBER: 2004:220154 CAPLUS

DOCUMENT NUMBER: 140:247088  
 TITLE: Treatment of pain by inhibition of p38 MAP kinase  
 INVENTOR(S): Protter, Andrew Asher; Svensson, Camilla; Yaksh, Tony;  
 Cordell, Barbara; Dugar, Sundeep  
 PATENT ASSIGNEE(S): Scios Inc., USA  
 SOURCE: PCT Int. Appl., 100 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

| PATENT NO.                                                                                                                                                                                                                                                                                                                                                                        | KIND | DATE     | APPLICATION NO. | DATE       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-----------------|------------|
| WO 2004021988                                                                                                                                                                                                                                                                                                                                                                     | A2   | 20040318 | WO 2003-US27631 | 20030905   |
| WO 2004021988                                                                                                                                                                                                                                                                                                                                                                     | A3   | 20040826 |                 |            |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW |      |          |                 |            |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG                                                                                                                |      |          |                 |            |
| CA 2497951                                                                                                                                                                                                                                                                                                                                                                        | AA   | 20040318 | CA 2003-2497951 | 20030905   |
| EP 1545535                                                                                                                                                                                                                                                                                                                                                                        | A2   | 20050629 | EP 2003-749389  | 20030905   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK                                                                                                                                                                                                                                                     |      |          |                 |            |
| PRIORITY APPLN. INFO.:                                                                                                                                                                                                                                                                                                                                                            |      |          | US 2002-408610P | P 20020905 |
|                                                                                                                                                                                                                                                                                                                                                                                   |      |          | WO 2003-US27631 | W 20030905 |

OTHER SOURCE(S): MARPAT 140:247088

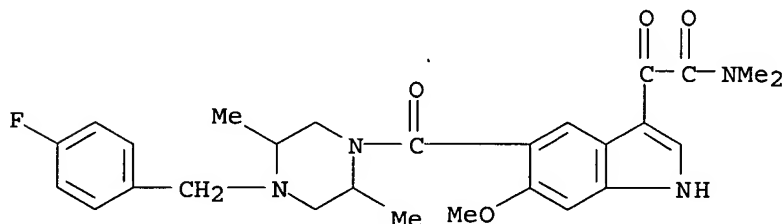
AB The invention provides methods for the prevention or treatment of pain by the inhibition of p38 MAP kinase.

IT 309914-79-2 669695-33-4 669695-34-5  
 669695-35-6 669695-36-7

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (p38 MAP kinase inhibitors for treatment of pain)

RN 309914-79-2 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

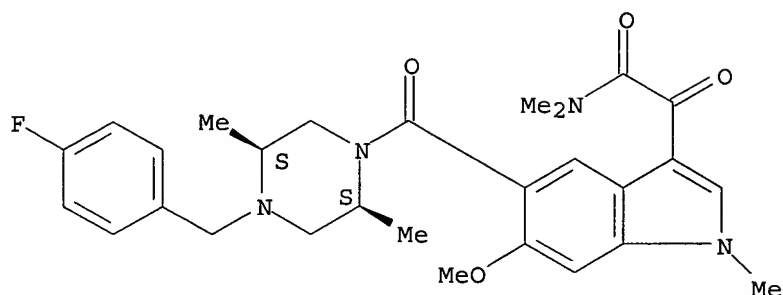


RN 669695-33-4 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2S,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,1-trimethyl- $\alpha$ -oxo- (9CI) (CA

INDEX NAME)

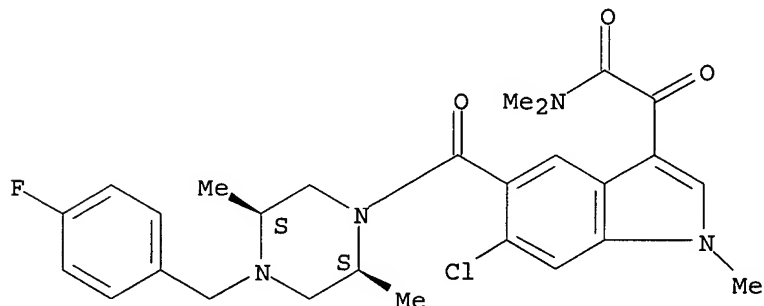
Absolute stereochemistry.



RN 669695-34-5 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5R)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl- $\alpha$ -oxo-, rel- (9CI)  
(CA INDEX NAME)

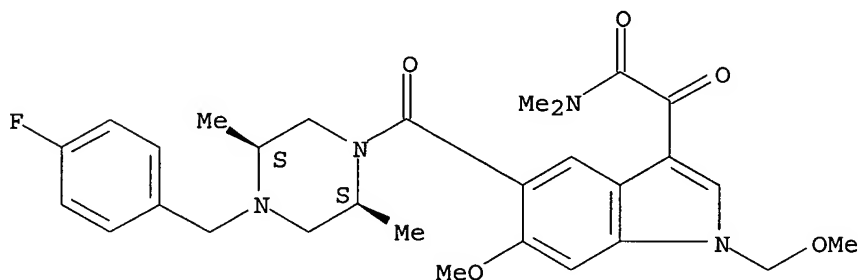
Relative stereochemistry.



RN 669695-35-6 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5R)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1-(methoxymethyl)-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



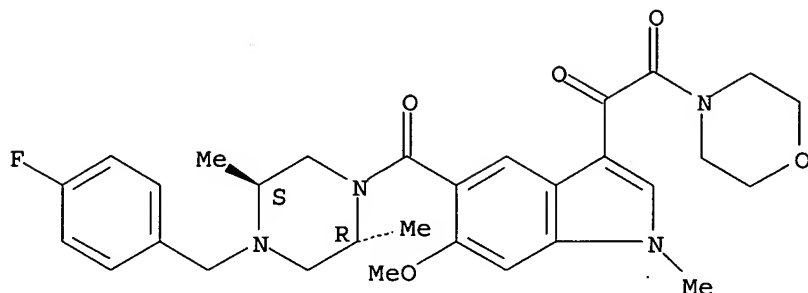
RN 669695-36-7 CAPLUS

CN Morpholine, 4-[[[5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1-methyl-1H-indol-3-yl]oxoacetyl]-, rel-



(9CI) (CA INDEX NAME)

Relative stereochemistry.



L24 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2004:203623 CAPLUS

DOCUMENT NUMBER: 140:247108

TITLE: Bone healing and promoting osteogenesis by administration of a p38 MAP kinase inhibitor

INVENTOR(S): Protter, Andrew Asher; Liu, David Y.

PATENT ASSIGNEE(S): Scios Inc., USA

SOURCE: PCT Int. Appl., 127 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND | DATE     | APPLICATION NO. | DATE     |
|---------------|------|----------|-----------------|----------|
| WO 2004019873 | A2   | 20040311 | WO 2003-US26839 | 20030829 |
| WO 2004019873 | C2   | 20040624 |                 |          |
| WO 2004019873 | A3   | 20041007 |                 |          |

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

|               |    |          |                 |          |
|---------------|----|----------|-----------------|----------|
| CA 2497240    | AA | 20040311 | CA 2003-2497240 | 20030829 |
| US 2004162289 | A1 | 20040819 | US 2003-651934  | 20030829 |
| EP 1539121    | A2 | 20050615 | EP 2003-791848  | 20030829 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK

|                        |                 |   |          |
|------------------------|-----------------|---|----------|
| PRIORITY APPLN. INFO.: | US 2002-406664P | P | 20020829 |
|                        | WO 2003-US26839 | W | 20030829 |

OTHER SOURCE(S): MARPAT 140:247108

AB The invention discloses methods of bone healing by administering a p38 MAP kinase inhibitor. Specifically, the invention provides methods of treating bone fractures, bone diseases, bone grafting, especially enhancing bone

healing following facial reconstruction, maxillary reconstruction, mandibular reconstruction or tooth extraction, enhancing long bone extension, enhancing prosthetic ingrowth, and increasing bone synostosis by administering a p38 MAP kinase inhibitor.

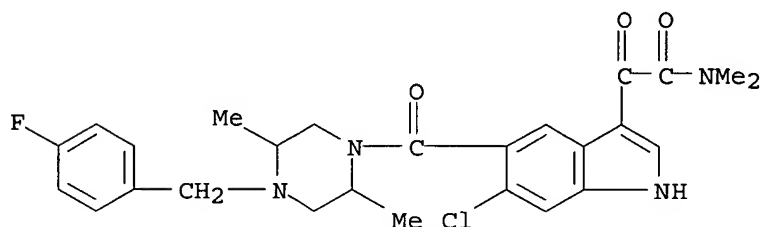
IT 309914-87-2

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(bone healing and promoting osteogenesis by administration of a p38 MAP kinase inhibitor)

RN 309914-87-2 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



L24 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:396662 CAPLUS

DOCUMENT NUMBER: 138:379271

TITLE: Method using imidazole derivatives to treat cystic fibrosis

INVENTOR(S): Higgins, Linda S.; Liu, David Y.; Protter, Andrew A.

PATENT ASSIGNEE(S): Scios Inc., USA

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.    | KIND                                                                                                                                                                                                                                                                                                                                                                   | DATE     | APPLICATION NO. | DATE     |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|----------|
| WO 2003041644 | A2                                                                                                                                                                                                                                                                                                                                                                     | 20030522 | WO 2002-US35939 | 20021108 |
| WO 2003041644 | A3                                                                                                                                                                                                                                                                                                                                                                     | 20031113 |                 |          |
| W:            | AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW |          |                 |          |
| RW:           | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG                                                                                                                     |          |                 |          |
| CA 2466665    | AA                                                                                                                                                                                                                                                                                                                                                                     | 20030522 | CA 2002-2466665 | 20021108 |
| US 2004009990 | A1                                                                                                                                                                                                                                                                                                                                                                     | 20040115 | US 2002-291243  | 20021108 |
| EP 1453515    | A2                                                                                                                                                                                                                                                                                                                                                                     | 20040908 | EP 2002-778799  | 20021108 |
| R:            | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,                                                                                                                                                                                                                                                                                                        |          |                 |          |

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK

BR 2002014020 A 20041013 BR 2002-14020 20021108

TR 200401028 T2 20041122 TR 2004-200401028 20021108

JP 2005511616 T2 20050428 JP 2003-543531 20021108

PRIORITY APPLN. INFO.:

US 2001-338209P P 20011109

WO 2002-US35939 W 20021108

OTHER SOURCE(S): MARPAT 138:379271

AB The invention is directed to methods to treat cystic fibrosis by administering certain imidazole derivs.

IT 309913-59-5P 309913-60-8P 309913-64-2P

309913-71-1P 309913-72-2P 309913-73-3P

309913-74-4P 309913-82-4P 309913-83-5P

309913-85-7P 309913-88-0P 309914-02-1P

309914-14-5P 309914-17-8P 309914-21-4P

309914-25-8P 309914-60-1P 309914-62-3P

309914-71-4P 309914-73-6P 309914-77-0P

309914-78-1P 309914-79-2P 309914-80-5P

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309914-95-2P 309914-96-3P 309915-01-3P

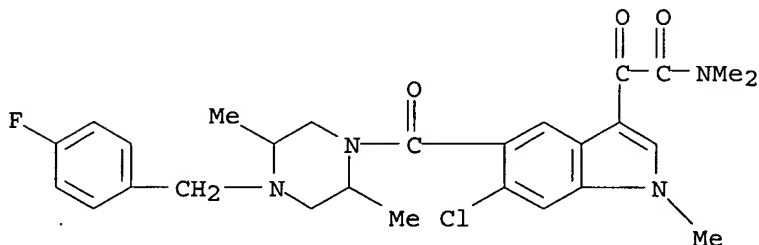
309915-02-4P 309915-04-6P 527698-34-6P

527698-35-7P 527698-36-8P 527698-38-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

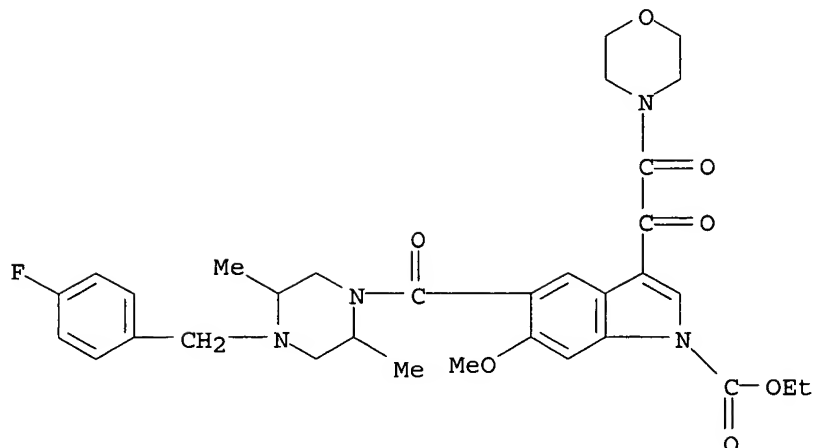
(imidazole derivs. for treatment of cystic fibrosis)

RN 309913-59-5 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

RN 309913-60-8 CAPLUS

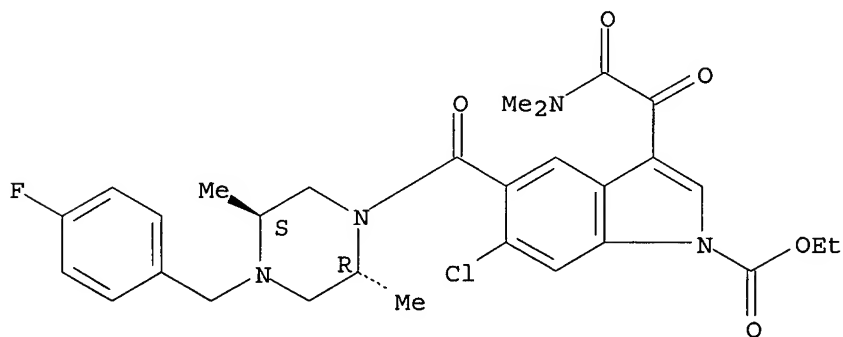
CN 1H-Indole-1-carboxylic acid, 5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-3-(4-morpholinyl-oxoacetyl)-, ethyl ester (9CI) (CA INDEX NAME)



RN 309913-64-2 CAPLUS

CN 1H-Indole-1-carboxylic acid, 6-chloro-3-[(dimethylamino)oxoacetyl]-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-ethyl ester, rel- (9CI) (CA INDEX NAME)

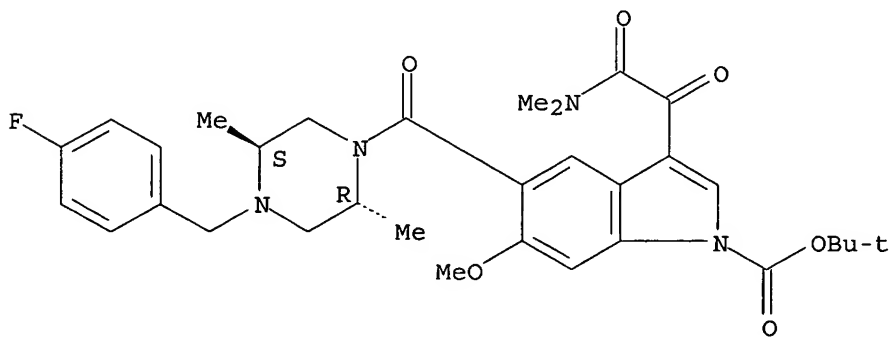
Relative stereochemistry.



RN 309913-71-1 CAPLUS

CN 1H-Indole-1-carboxylic acid, 3-[(dimethylamino)oxoacetyl]-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-, 1,1-dimethylethyl ester, rel- (9CI) (CA INDEX NAME)

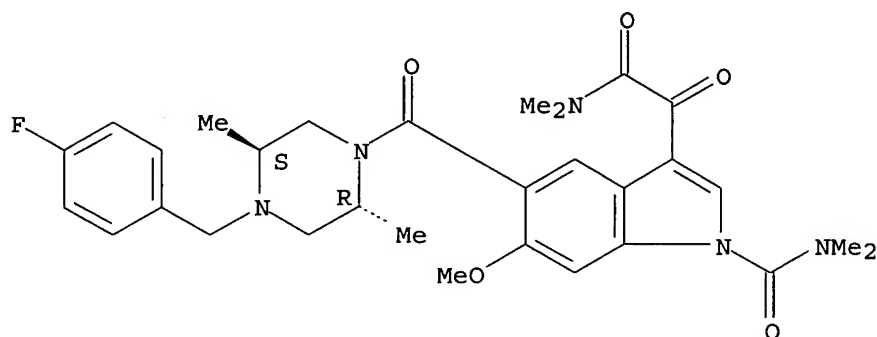
Relative stereochemistry.



RN 309913-72-2 CAPLUS

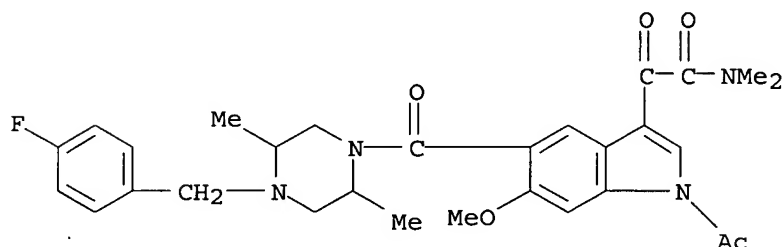
CN 1H-Indole-3-acetamide, 1-[(dimethylamino)carbonyl]-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 309913-73-3 CAPLUS

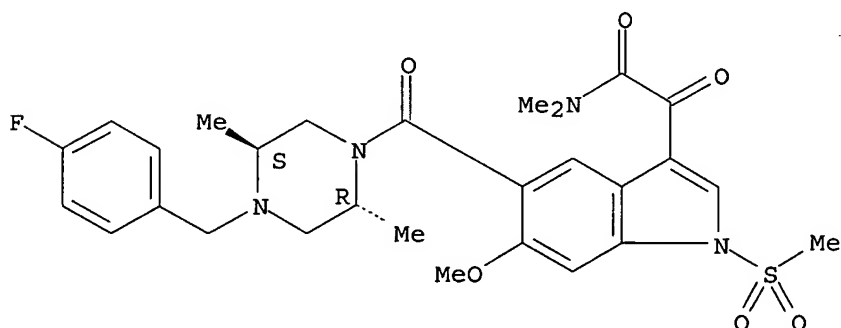
CN 1H-Indole-3-acetamide, 1-acetyl-5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



RN 309913-74-4 CAPLUS

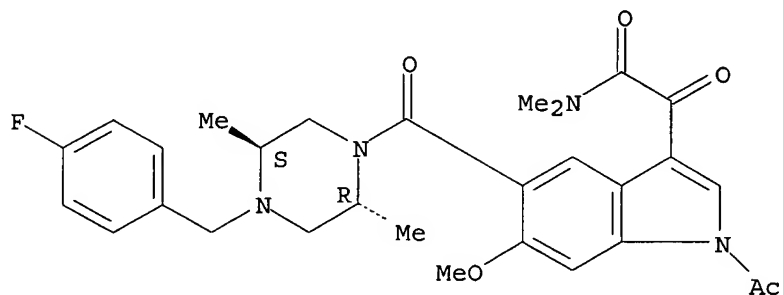
CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl-1-(methylsulfonyl)- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



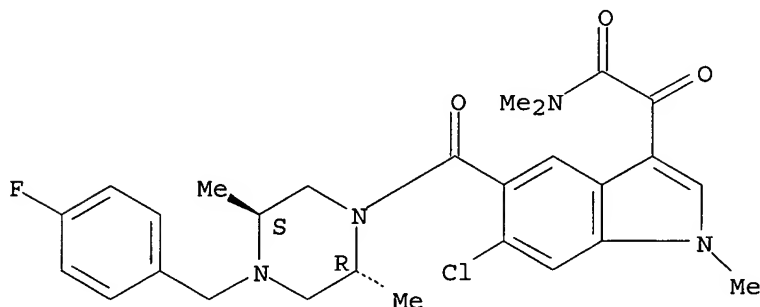
RN 309913-82-4 CAPLUS  
 CN 1H-Indole-3-acetamide, 1-acetyl-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



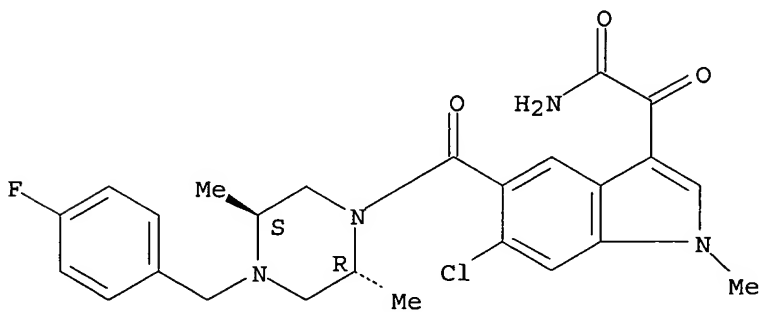
RN 309913-83-5 CAPLUS  
 CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 309913-85-7 CAPLUS  
 CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-methyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

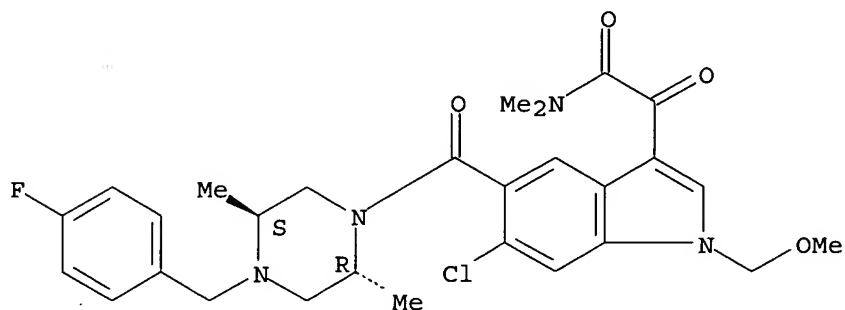
Relative stereochemistry.



RN 309913-88-0 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[ (2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-(methoxymethyl)-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

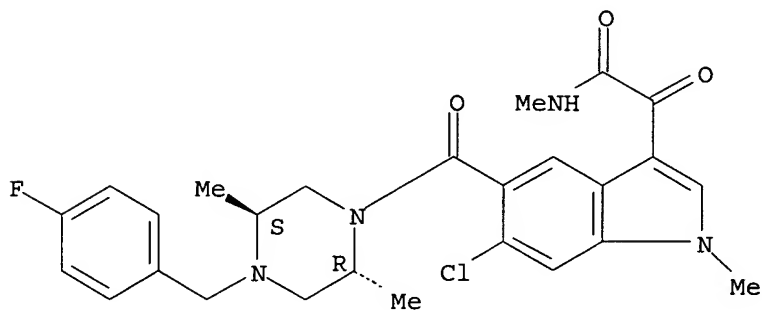
Relative stereochemistry.



RN 309914-02-1 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[ (2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,1-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

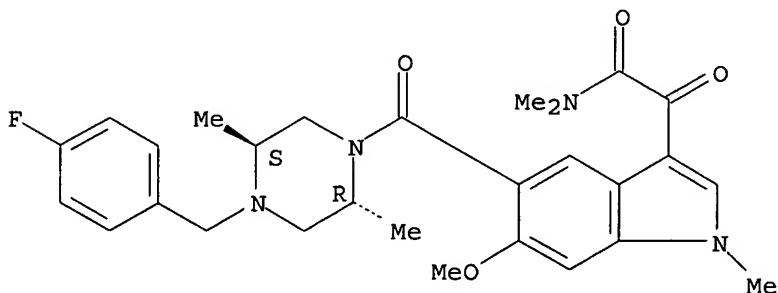
Relative stereochemistry.



RN 309914-14-5 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[ (2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,1-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

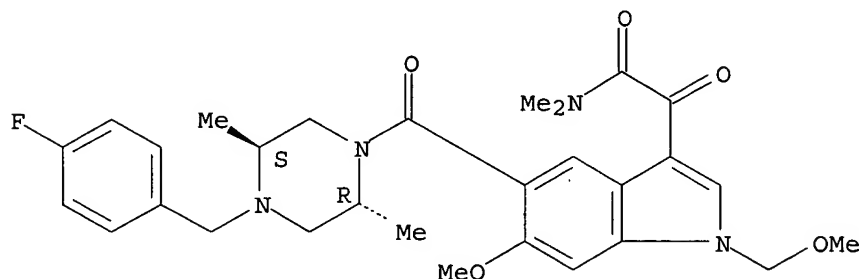
Absolute stereochemistry.



RN 309914-17-8 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1-(methoxymethyl)-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

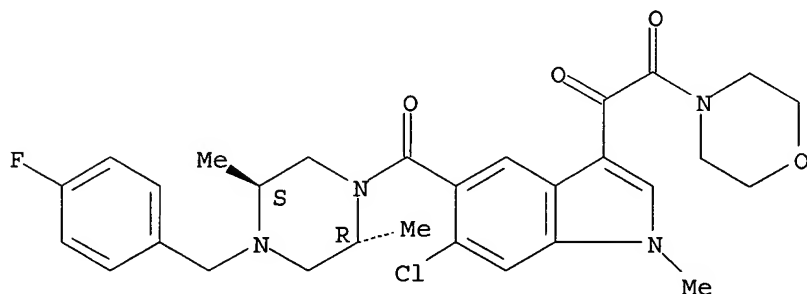
Absolute stereochemistry.



RN 309914-21-4 CAPLUS

CN Morpholine, 4-[[[6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-methyl-1H-indol-3-yl]oxoacetyl]- (9CI) (CA INDEX NAME)

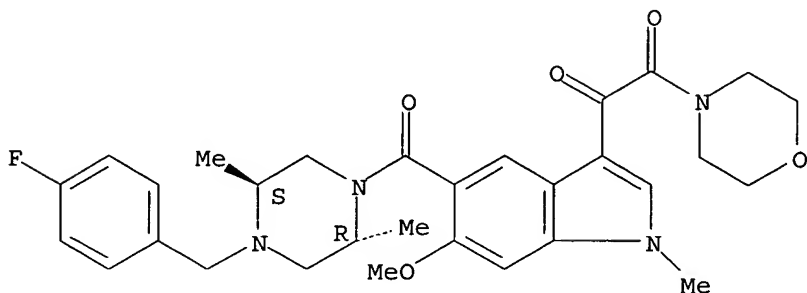
Absolute stereochemistry.



RN 309914-25-8 CAPLUS

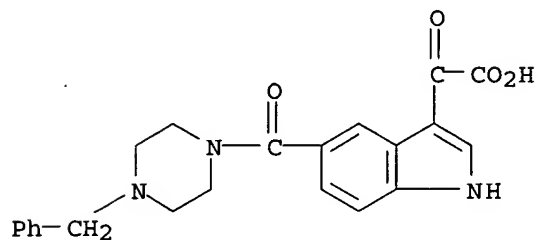
CN Morpholine, 4-[[[5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1-methyl-1H-indol-3-yl]oxoacetyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

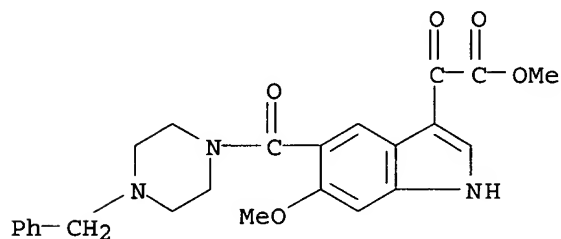




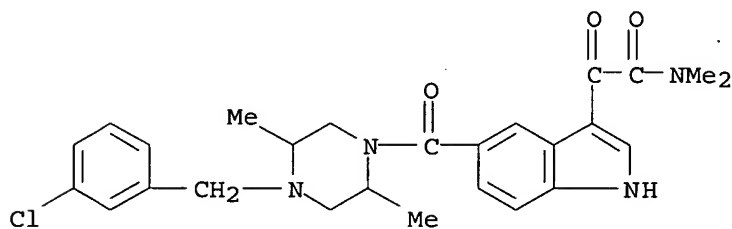
RN 309914-60-1 CAPLUS  
 CN 1H-Indole-3-acetic acid,  $\alpha$ -oxo-5-[[4-(phenylmethyl)-1-piperazinyl]carbonyl]- (9CI) (CA INDEX NAME)



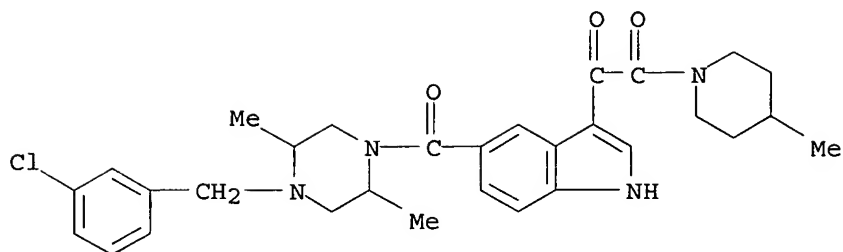
RN 309914-62-3 CAPLUS  
 CN 1H-Indole-3-acetic acid, 6-methoxy- $\alpha$ -oxo-5-[[4-(phenylmethyl)-1-piperazinyl]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)



RN 309914-71-4 CAPLUS  
 CN 1H-Indole-3-acetamide, 5-[[4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



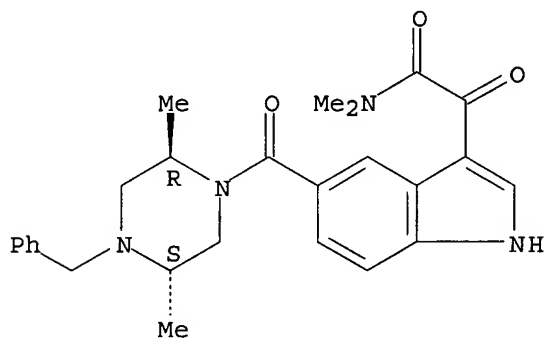
RN 309914-73-6 CAPLUS  
 CN Piperazine, 1-[(3-chlorophenyl)methyl]-2,5-dimethyl-4-[[3-[(4-methyl-1-piperidinyl)oxoacetyl]-1H-indol-5-yl]carbonyl]- (9CI) (CA INDEX NAME)



RN 309914-77-0 CAPLUS

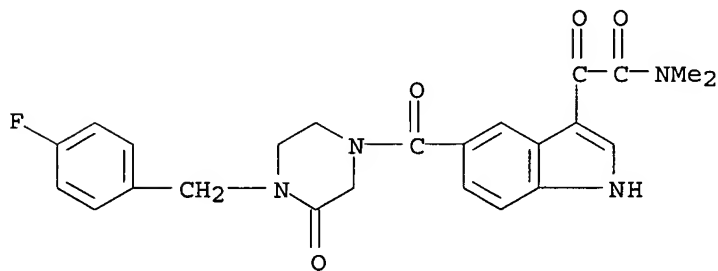
CN 1H-Indole-3-acetamide, 5-[[ (2R,5S)-2,5-dimethyl-4-(phenylmethyl)-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



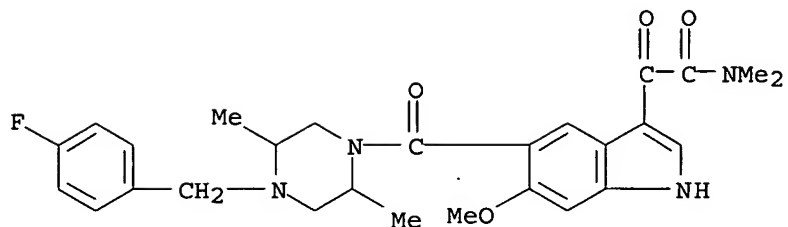
RN 309914-78-1 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-3-oxo-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



RN 309914-79-2 CAPLUS

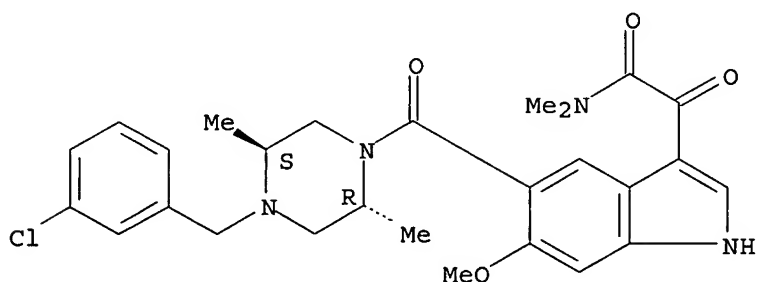
CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



RN 309914-80-5 CAPLUS

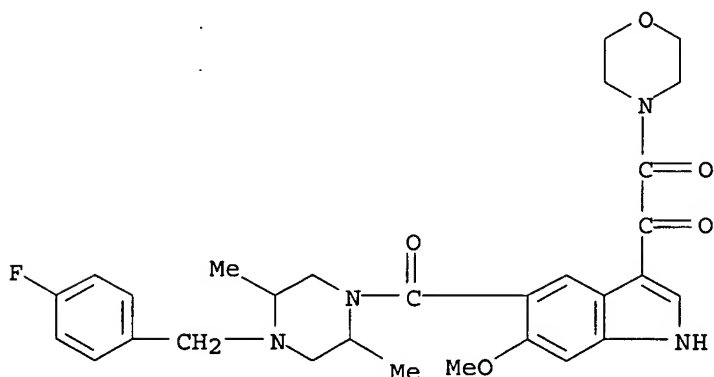
CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.



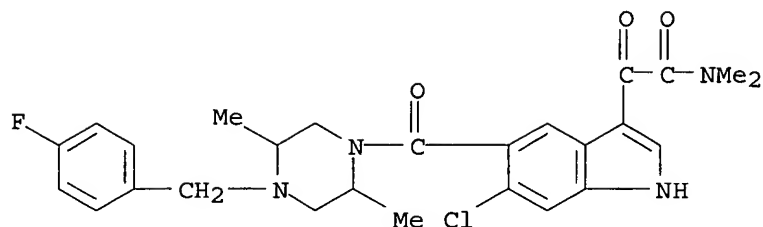
RN 309914-86-1 CAPLUS

CN Morpholine, 4-[[5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1H-indol-3-yl]oxoacetyl]- (9CI) (CA INDEX NAME)



RN 309914-87-2 CAPLUS

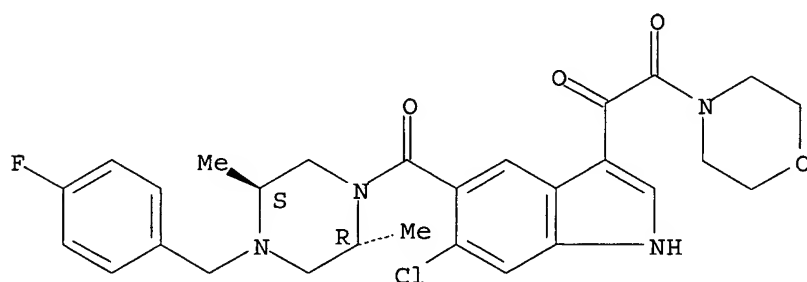
CN 1H-Indole-3-acetamide, 6-chloro-5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



RN 309914-89-4 CAPLUS

CN Morpholine, 4-[[6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1H-indol-3-yl]oxoacetyl]-, rel- (9CI)  
(CA INDEX NAME)

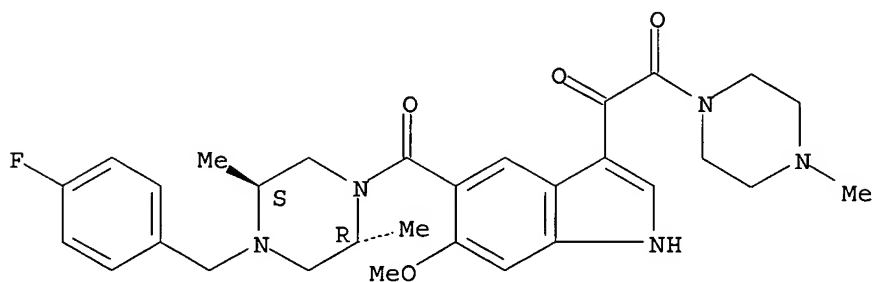
Relative stereochemistry.



RN 309914-95-2 CAPLUS

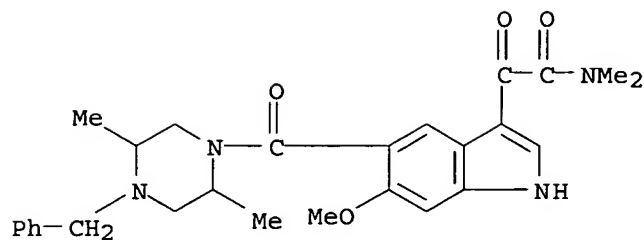
CN Piperazine, 1-[(4-fluorophenyl)methyl]-4-[[6-methoxy-3-[(4-methyl-1-piperazinyl)oxoacetyl]-1H-indol-5-yl]carbonyl]-2,5-dimethyl-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 309914-96-3 CAPLUS

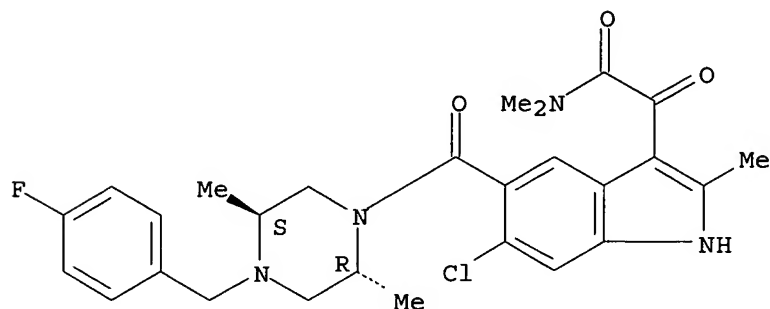
CN 1H-Indole-3-acetamide, 5-[[2,5-dimethyl-4-(phenylmethyl)-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl-α-oxo- (9CI) (CA INDEX NAME)



RN 309915-01-3 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[ (2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,2-trimethyl- $\alpha$ -oxo-, rel- (9CI)  
(CA INDEX NAME)

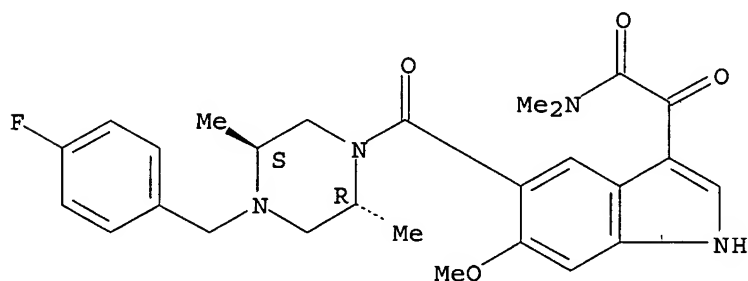
Relative stereochemistry.



RN 309915-02-4 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[ (2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI)  
(CA INDEX NAME)

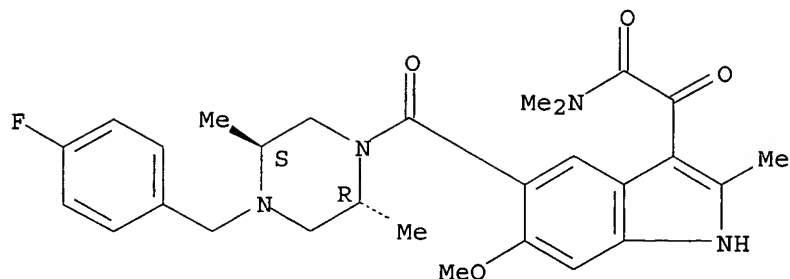
Relative stereochemistry.



RN 309915-04-6 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[ (2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,2-trimethyl- $\alpha$ -oxo-, rel- (9CI)  
(CA INDEX NAME)

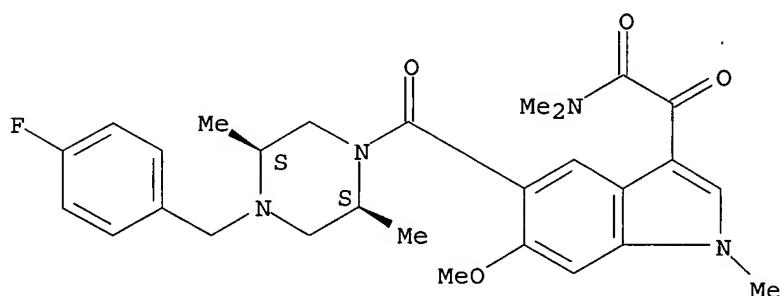
Relative stereochemistry.



RN 527698-34-6 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5R)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,1-trimethyl- $\alpha$ -oxo-, rel- (9CI)  
(CA INDEX NAME)

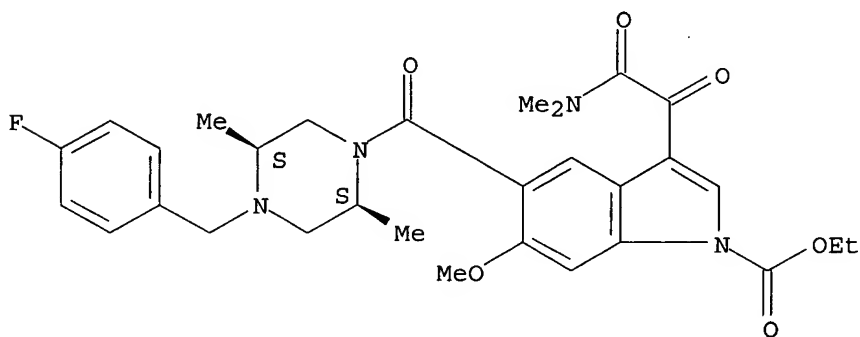
Relative stereochemistry.



RN 527698-35-7 CAPLUS

CN 1H-Indole-1-carboxylic acid, 3-[(dimethylamino)oxoacetyl]-5-[[[(2R,5R)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-, ethyl ester, rel- (9CI) (CA INDEX NAME)

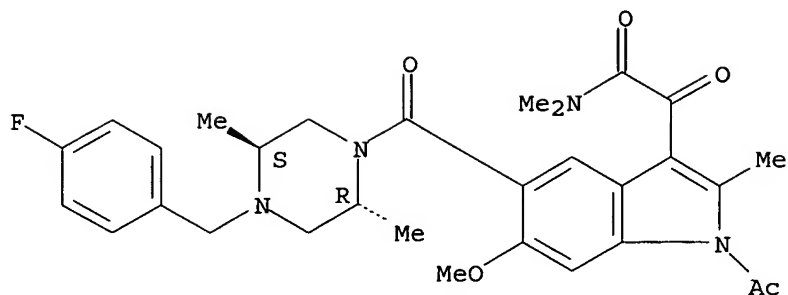
Relative stereochemistry.



RN 527698-36-8 CAPLUS

CN 1H-Indole-3-acetamide, 1-acetyl-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,2-trimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

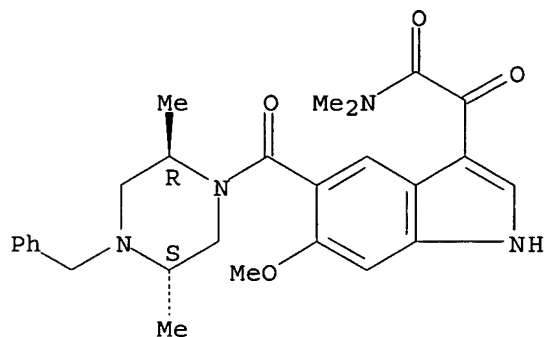
Relative stereochemistry.



RN 527698-38-0 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-2,5-dimethyl-4-(phenylmethyl)-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L24 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2003:282118 CAPLUS

DOCUMENT NUMBER: 138:304300

TITLE: Preparation and antiviral activity of substituted piperazinyloxoacetylindole derivatives

INVENTOR(S): Wallace, Owen B.; Wang, Tao; Yeung, Kap-Sun; Pearce, Bradley C.; Meanwell, Nicholas A.; Qiu, Zhilei; Fang, Haiquan; Xue, Qiufen May; Yin, Zhiwei

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 182 pp., Cont.-in-part of U.S. Ser. No. 888,686.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

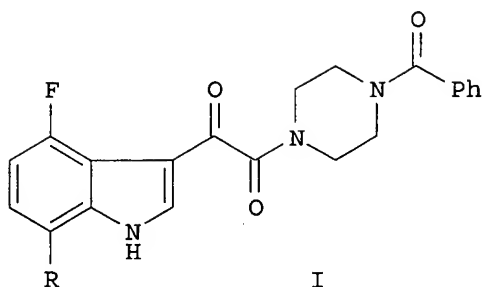
| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE       |
|------------------------|------|----------|-----------------|------------|
| US 2003069245          | A1   | 20030410 | US 2001-27612   | 20011219   |
| US 6573262             | B2   | 20030603 |                 |            |
| PRIORITY APPLN. INFO.: |      |          | US 2000-217444P | P 20000710 |
|                        |      |          | US 2001-265978P | P 20010202 |

US 2001-888686

A2 20010625

OTHER SOURCE(S) :  
GI

MARPAT 138:304300



AB Piperazinyloxoacetylindole derivs., e.g. I (R = Ph), were prepared and tested as human antiviral agents, specifically to be used for treating HIV and AIDS. Thus, bromoindole I (R = Br) (II) reacted with tri-n-butylphenyltin to give I (R = Ph). Furthermore, II was prepared by reacting 2-bromo-5-fluoronitrobenzene with vinylmagnesium bromide, which gave 4-fluoro-7-bromoindole. The latter compound was then added to Et chlorooxoacetate to give the acylated adduct which was hydrolyzed to the acid and aminated with N-benzoylpiperazine. Testing of these compds. indicated that they possess unique antiviral activity; and they are proposed to be used alone or in combination with other antivirals, antiinfectives, immunomodulators or HIV entry inhibitors.

IT **389629-30-5P**, 1-(4-Benzoyl-2-(R)-methylpiperazin-1-yl)-2-[7-(4-benzylpiperazine-1-carbonyl)-1H-indol-3-yl]ethane-1,2-dione

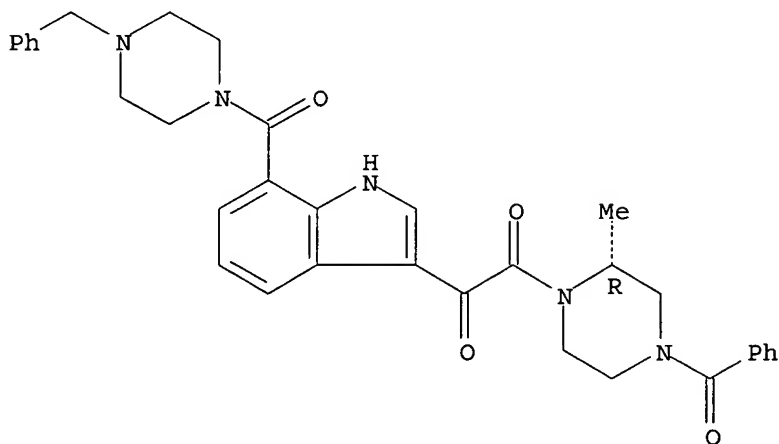
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of piperazinyloxoacetylindole derivs. and their use as human antiviral, antiinfective, anti-HIV, anti-AIDS, and immunomodulator agents)

RN 389629-30-5 CAPLUS

CN Piperazine, 4-benzoyl-2-methyl-1-[oxo[7-[[4-(phenylmethyl)-1-piperazinyl]carbonyl]-1H-indol-3-yl]acetyl]-, (2R)- (9CI) (CA INDEX NAME)

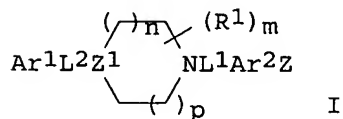
Absolute stereochemistry.





L24 ANSWER 10 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:449650 CAPLUS  
 DOCUMENT NUMBER: 137:33320  
 TITLE: Preparation of aroylpiperidines and -piperazines as inhibitors of p38 kinase.  
 INVENTOR(S): Dugar, Sundeeep; Perumattam, John; Tester, Richland; Lu, Qing  
 PATENT ASSIGNEE(S): Scios Inc., USA  
 SOURCE: PCT Int. Appl., 54 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | KIND | DATE     | APPLICATION NO.  | DATE        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|------------------|-------------|
| WO 2002046158                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A2   | 20020613 | WO 2001-US43824  | 20011120    |
| WO 2002046158                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | C2   | 20030501 |                  |             |
| WO 2002046158                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A3   | 20030821 |                  |             |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG |      |          |                  |             |
| CA 2429258                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | AA   | 20020613 | CA 2001-2429258  | 20011120    |
| AU 2002043230                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A5   | 20020618 | AU 2002-43230    | 20011120    |
| US 2002198214                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A1   | 20021226 | US 2001-990184   | 20011120    |
| US 6696443                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | B2   | 20040224 |                  |             |
| EP 1353905                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | A2   | 20031022 | EP 2001-989111   | 20011120    |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |      |          |                  |             |
| JP 2004533989                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | T2   | 20041111 | JP 2002-547897   | 20011120    |
| US 2004176382                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | A1   | 20040909 | US 2004-757023   | 20040113    |
| PRIORITY APPLN. INFO.:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |          | US 2000-252196P  | P 20001120  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |          | US 2001-990184   | A3 20011120 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |      |          | WO 2001-US43824  | W 20011120  |
| OTHER SOURCE(S):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |      |          | MARPAT 137:33320 |             |
| GI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |      |          |                  |             |



AB Title compds. [I; Ar1 = substituted aryl; L1, L2 = linker; R1 = noninterfering substituent; Z1 = CR2, N; R2 = H, noninterfering substituent; m = 0-4; n, p = 0-2; n+p = 0-3; Ar2 = substantially planar, mono- or polycyclic (substituted) (hetero)aryl; Z = WCOXY; Y = COR3, isostere thereof; R3 = noninterfering substituent; W, X = spacer of 2-6

Å; i, j = 0, 1; wherein the smallest number of covalent bonds in the compound separating the atom of Ar1 bonded to L2 to the atom of Ar2 bonded to

L1

≥6, where each of said bonds has a bond length of 1.2-2.0 Å; and/or wherein the distance in space between the atom of Ar1 bonded to L2 and the atom of Ar2 bonded to L1 = 4.5-24 Å; with a proviso], were prepared as p38-α kinase inhibitors (no data). Thus, 2,5-dimethyl-1H-pyrrole-3-carboxylic acid and 1-(4-fluorobenzyl)trans-2,5-dimethylpiperazine in CH<sub>2</sub>Cl<sub>2</sub> were treated with EDCI and catalytic DMAP followed by stirring for 12 h to give (2,5-dimethyl-1H-pyrrol-3-yl) [4-(4-fluorobenzyl)trans-2,5-dimethylpiperazine-1-yl]methanone. The latter in CH<sub>2</sub>Cl<sub>2</sub> at 0° was treated with (COCl)<sub>2</sub> and then with Me<sub>2</sub>NH to give 2-[4-[4-(4-Fluorobenzyl)-2,5-trans-dimethylpiperazine-1-carbonyl]-2,5-dimethyl-1H-pyrrol-3-yl]-N,N-dimethyl-2-oxoacetamide.

IT 436848-18-9P

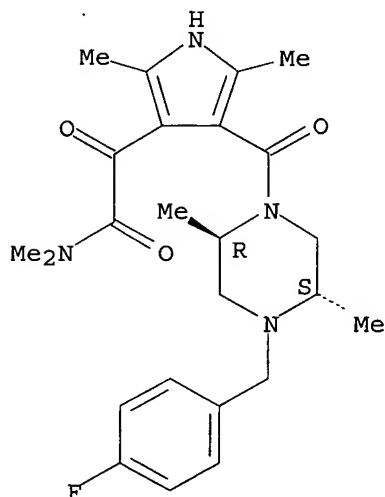
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of aroylpiperidines and -piperazines as inhibitors of p38 kinase)

RN 436848-18-9 CAPLUS

CN 1H-Pyrrole-3-acetamide, 4-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,2,5-tetramethyl-α-oxo-, rel-(9CI) (CA INDEX NAME)

Relative stereochemistry.



L24 ANSWER 11 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

ACCESSION NUMBER: 2002:408665 CAPLUS

DOCUMENT NUMBER: 136:401784

TITLE: Preparation of piperidinyldicarbonyl- and piperazinylcarbonylindolylglyoxylates and -amides as inhibitors of p38-α kinase

INVENTOR(S): Dugar, Sundeep; Luedtke, Gregory; Tan, Xuefei

PATENT ASSIGNEE(S): Scios Inc., USA

SOURCE: PCT Int. Appl., 97 pp.

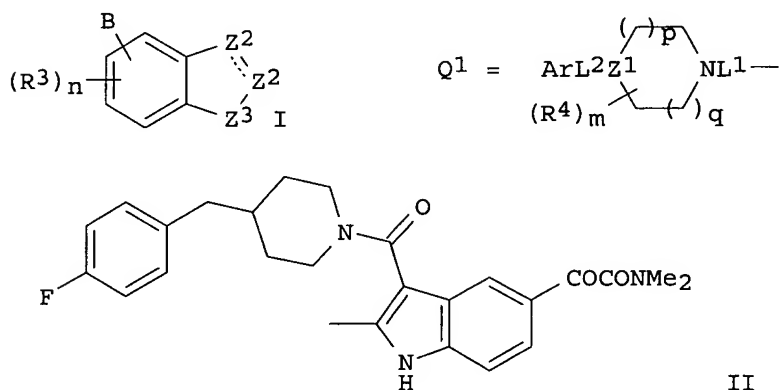
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.                                                      | KIND | DATE     | APPLICATION NO. | DATE        |
|-----------------------------------------------------------------|------|----------|-----------------|-------------|
| WO 2002042292                                                   | A2   | 20020530 | WO 2001-US43441 | 20011120    |
| WO 2002042292                                                   | A3   | 20021017 |                 |             |
| W:                                                              |      |          |                 |             |
| AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, |      |          |                 |             |
| CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, |      |          |                 |             |
| GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, |      |          |                 |             |
| LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, |      |          |                 |             |
| PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, |      |          |                 |             |
| UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM      |      |          |                 |             |
| RW:                                                             |      |          |                 |             |
| GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, |      |          |                 |             |
| CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, |      |          |                 |             |
| BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  |      |          |                 |             |
| CA 2429605                                                      | AA   | 20020530 | CA 2001-2429605 | 20011120    |
| AU 2002026911                                                   | A5   | 20020603 | AU 2002-26911   | 20011120    |
| US 2003092717                                                   | A1   | 20030515 | US 2001-990187  | 20011120    |
| US 6821966                                                      | B2   | 20041123 |                 |             |
| EP 1341782                                                      | A2   | 20030910 | EP 2001-995861  | 20011120    |
| R:                                                              |      |          |                 |             |
| AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, |      |          |                 |             |
| IE, SI, LT, LV, FI, RO, MK, CY, AL, TR                          |      |          |                 |             |
| JP 2004529859                                                   | T2   | 20040930 | JP 2002-544426  | 20011120    |
| US 2005130965                                                   | A1   | 20050616 | US 2004-992968  | 20041118    |
| PRIORITY APPLN. INFO.:                                          |      |          | US 2000-252197P | P 20001120  |
|                                                                 |      |          | US 2001-990187  | A3 20011120 |
|                                                                 |      |          | WO 2001-US43441 | W 20011120  |

OTHER SOURCE(S): MARPAT 136:401784  
 GI



AB [Title compds. I; dotted line = optional double bond; B = WiCOXjY; Y = COR2, isostere thereof; R2 = H, noninterfering substituent; W, X = spacer of 2-6 Å; i, j = 0, 1; R3 = noninterfering substituent; n = 0-3; Z3 = NR7, O; R7 = H, noninterfering substituent; 1 Z2 = C, CR8A, the other = CR1, C(R1)2, NR6, N; R1, R6, R8 = H, noninterfering substituent; A = Q1; Z1 = CR5, N; R5 = H, noninterfering substituent; p, q = 0-2; p+q = 0-3; Ar = aryl group substituted with 0-5 noninterfering substituents, wherein two noninterfering substituents can form a fused ring; R4 = noninterfering substituent; m is 0-4; L1, L2 = linker; the distance between the atom of

Ar linked to L2 and the center of the Z2-containing ring = 4.5-24Å], were prepared as inhibitors of p38- $\alpha$  kinase (no data). Thus, title compound (III) was prepared in several steps starting from 4-nitrophenylglyoxylic acid.

IT 309915-13-7P 431061-37-9P 431061-38-0P  
 431061-39-1P 431061-40-4P 431061-41-5P  
 431061-42-6P 431061-43-7P 431061-44-8P  
 431061-45-9P 431061-46-0P 431061-47-1P  
 431061-48-2P 431061-49-3P 431061-50-6P  
 431061-51-7P 431061-52-8P 431061-53-9P  
 431061-54-0P 431061-55-1P 431061-56-2P  
 431061-57-3P 431061-58-4P 431061-59-5P  
 431061-60-8P 431061-61-9P 431061-62-0P  
 431061-63-1P 431061-64-2P 431061-65-3P  
 431061-66-4P 431061-67-5P 431061-68-6P  
 431061-69-7P 431061-70-0P 431061-71-1P  
 431061-72-2P 431061-73-3P 431061-74-4P  
 431061-75-5P 431061-76-6P 431061-77-7P  
 431061-78-8P 431061-79-9P 431061-80-2P  
 431061-81-3P 431061-82-4P 431061-83-5P  
 431061-84-6P 431061-85-7P 431061-86-8P  
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 431061-93-7P 431061-94-8P 431061-95-9P  
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 431061-99-3P

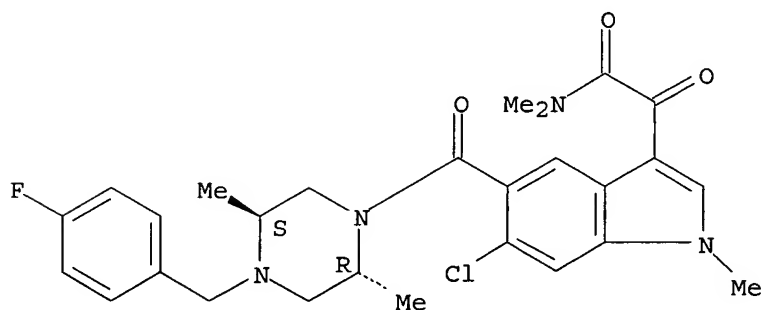
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of piperidinylcarbonyl- and piperazinylcarbonylindolylglyoxylates and -amides as inhibitors of p38- $\alpha$  kinase)

RN 309915-13-7 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl- $\alpha$ -oxo-, rel- (9CI)  
 (CA INDEX NAME)

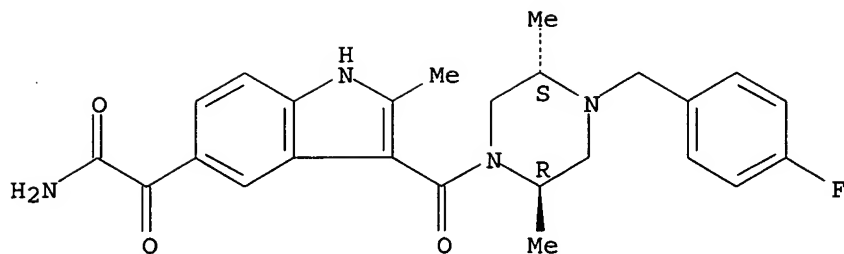
Relative stereochemistry.



RN 431061-37-9 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

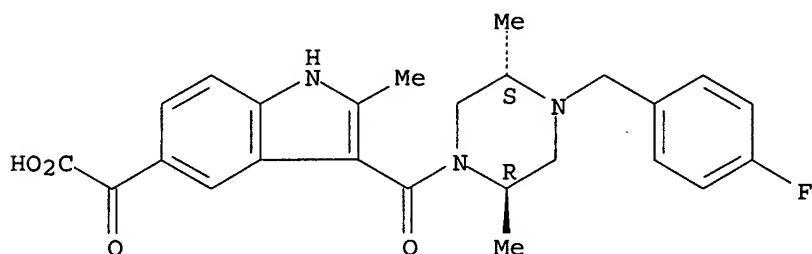
Relative stereochemistry.



RN 431061-38-0 CAPLUS

CN 1H-Indole-5-acetic acid, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl-α-oxo-, rel- (9CI) (CA INDEX NAME)

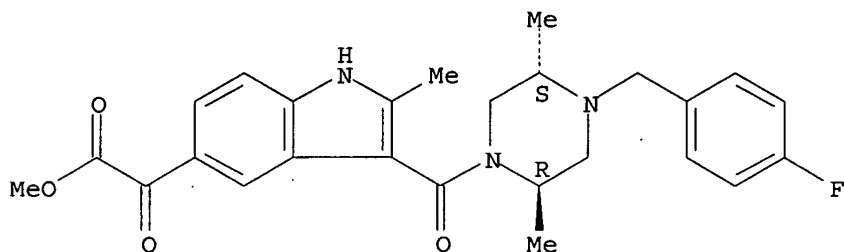
Relative stereochemistry.



RN 431061-39-1 CAPLUS

CN 1H-Indole-5-acetic acid, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl-α-oxo-, methyl ester, rel- (9CI) (CA INDEX NAME)

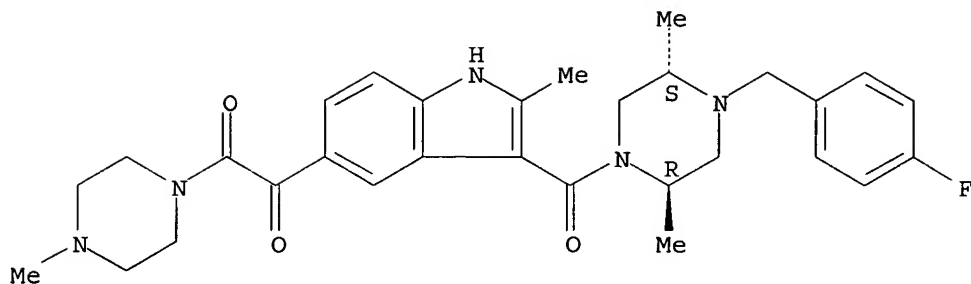
Relative stereochemistry.



RN 431061-40-4 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-2,5-dimethyl-4-[[[2-methyl-5-[(4-methyl-1-piperazinyl)oxoacetyl]-1H-indol-3-yl]carbonyl]-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

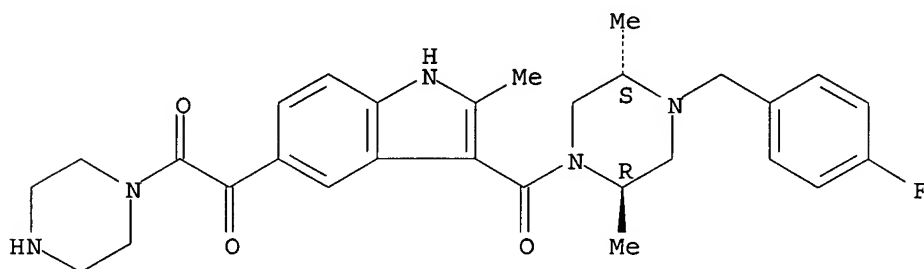
Relative stereochemistry.



RN 431061-41-5 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-2,5-dimethyl-4-[[2-methyl-5-(oxo-1-piperazinylacetyl)-1H-indol-3-yl]carbonyl]-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

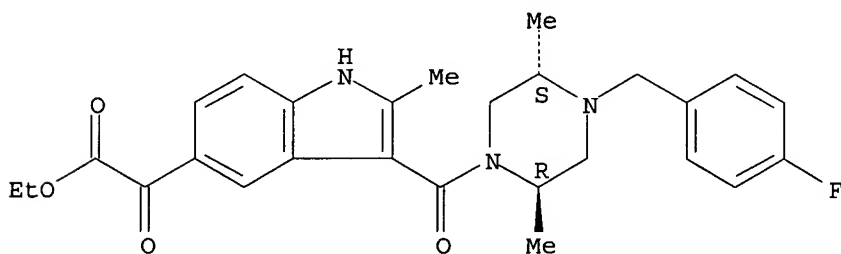
Relative stereochemistry.



RN 431061-42-6 CAPLUS

CN 1H-Indole-5-acetic acid, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl-α-oxo-, ethyl ester, rel- (9CI) (CA INDEX NAME)

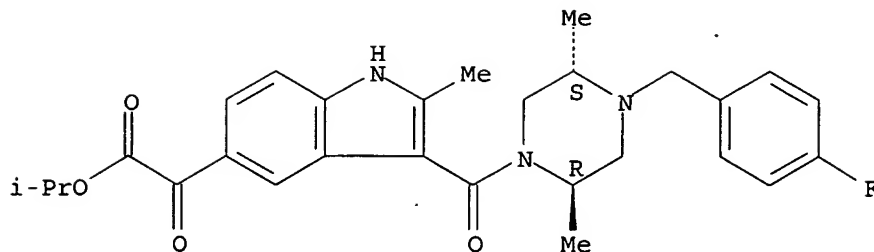
Relative stereochemistry.



RN 431061-43-7 CAPLUS

CN 1H-Indole-5-acetic acid, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl-α-oxo-, 1-methylethyl ester, rel- (9CI) (CA INDEX NAME)

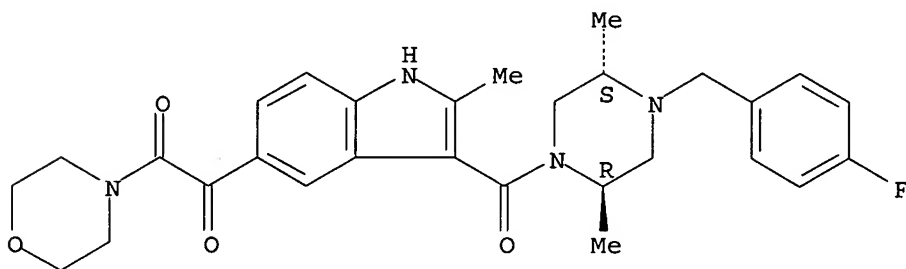
Relative stereochemistry.



RN 431061-44-8 CAPLUS

CN Morpholine, 4-[[3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl-1H-indol-5-yl]oxoacetyl]-, rel- (9CI) (CA INDEX NAME)

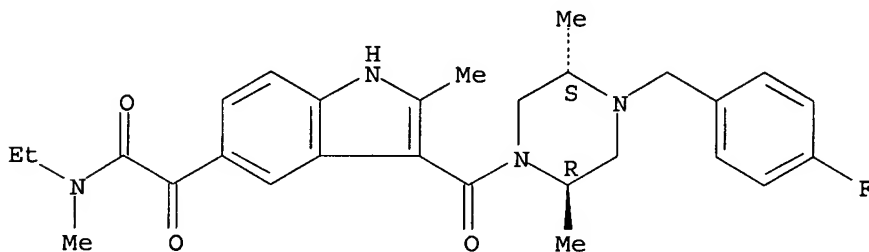
Relative stereochemistry.



RN 431061-45-9 CAPLUS

CN 1H-Indole-5-acetamide, N-ethyl-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,2-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

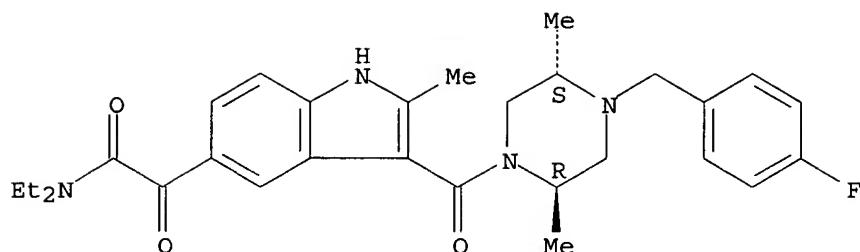
Relative stereochemistry.



RN 431061-46-0 CAPLUS

CN 1H-Indole-5-acetamide, N,N-diethyl-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

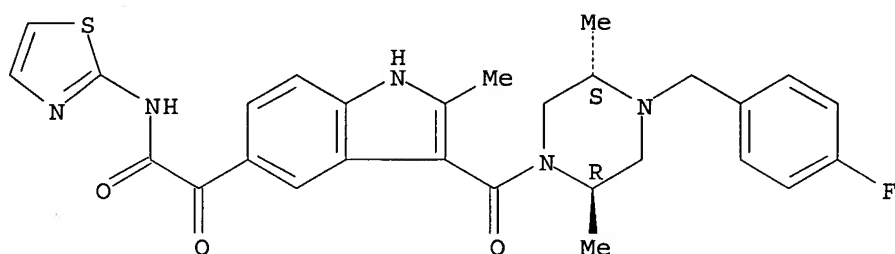
Relative stereochemistry.



RN 431061-47-1 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl-α-oxo-N-2-thiazolyl-, rel- (9CI)  
(CA INDEX NAME)

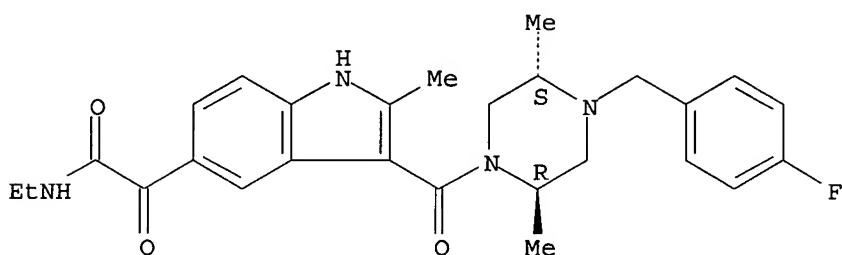
Relative stereochemistry.



RN 431061-48-2 CAPLUS

CN 1H-Indole-5-acetamide, N-ethyl-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl-α-oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

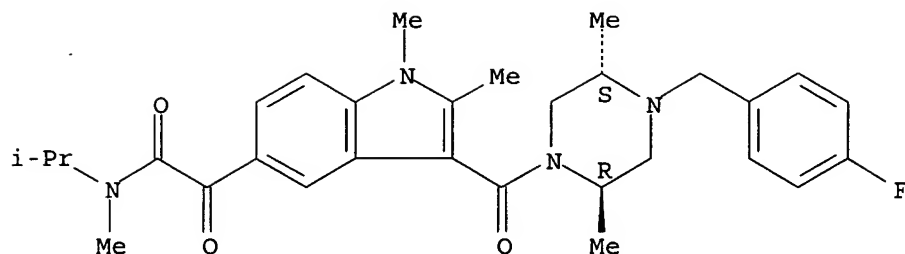


RN 431061-49-3 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,1,2-trimethyl-N-(1-methylethyl)-α-oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

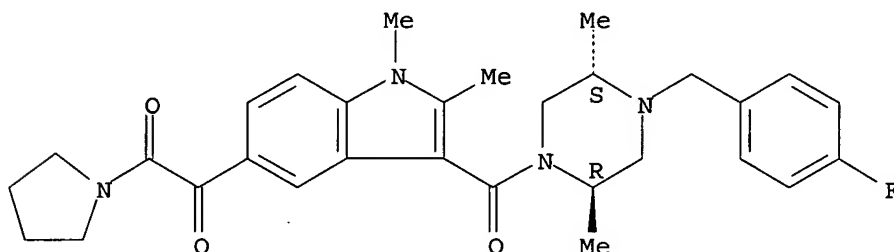




RN 431061-50-6 CAPLUS

CN Piperazine, 1-[[1,2-dimethyl-5-(oxo-1-pyrrolidinylacetyl)-1H-indol-3-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)-rel- (9CI)  
(CA INDEX NAME)

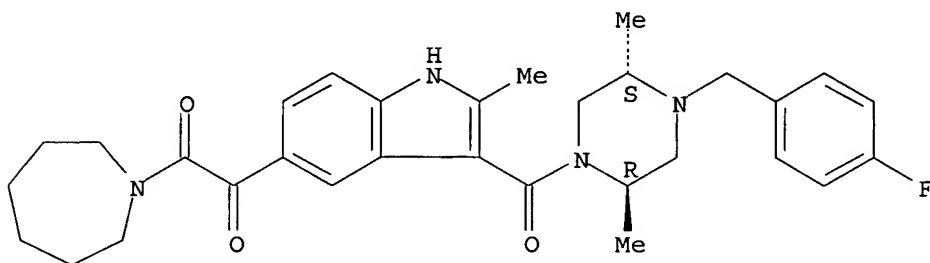
Relative stereochemistry.



RN 431061-51-7 CAPLUS

CN 1H-Azepine, 1-[[3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl-1H-indol-5-yl]oxoacetyl]hexahydro-, rel-(9CI) (CA INDEX NAME)

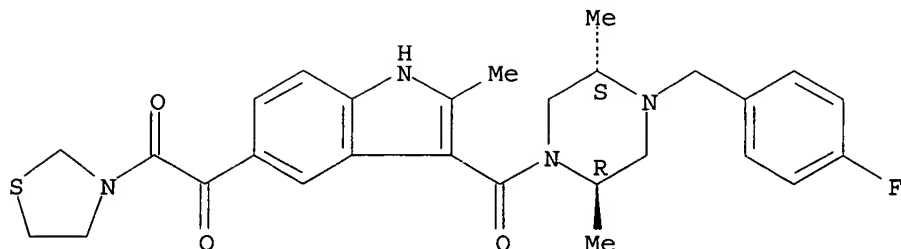
Relative stereochemistry.



RN 431061-52-8 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-2,5-dimethyl-4-[[2-methyl-5-(oxo-3-thiazolidinyl)acetyl]-1H-indol-3-yl]carbonyl-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

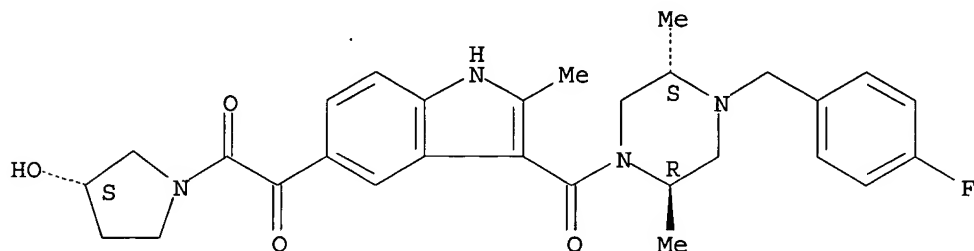
Relative stereochemistry.



RN 431061-53-9 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-4-[[5-[[[(3S)-3-hydroxy-1-pyrrolidinyl]oxoacetyl]-2-methyl-1H-indol-3-yl]carbonyl]-2,5-dimethyl-, (2S,5R)- (9CI) (CA INDEX NAME)

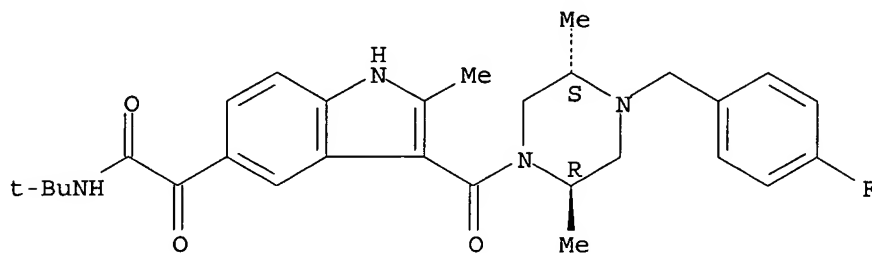
Absolute stereochemistry.



RN 431061-54-0 CAPLUS

CN 1H-Indole-5-acetamide, N-(1,1-dimethylethyl)-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

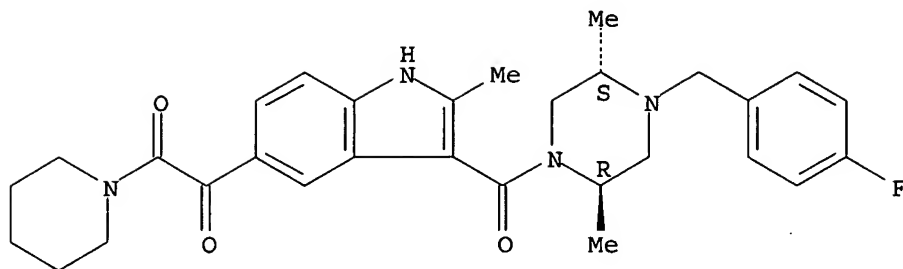
Relative stereochemistry.



RN 431061-55-1 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-2,5-dimethyl-4-[[2-methyl-5-(oxo-1-piperidinylacetyl)-1H-indol-3-yl]carbonyl]-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

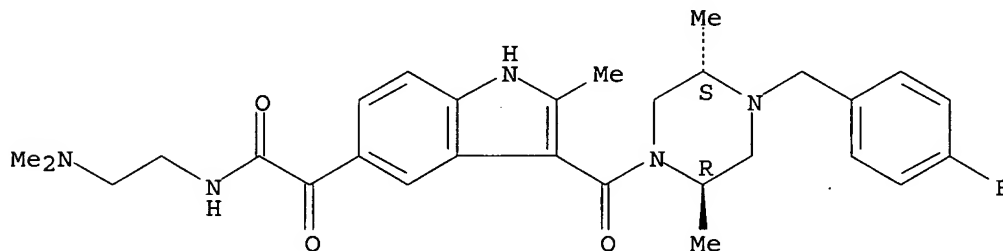
Relative stereochemistry.



RN 431061-56-2 CAPLUS

CN 1H-Indole-5-acetamide, N-[2-(dimethylamino)ethyl]-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

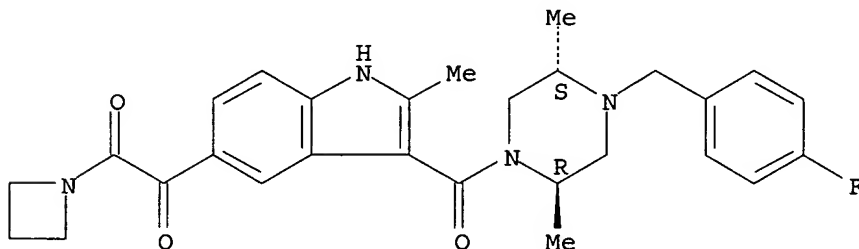
Relative stereochemistry.



RN 431061-57-3 CAPLUS

CN Piperazine, 1-[[[5-(1-azetidinyl-oxoacetyl)-2-methyl-1H-indol-3-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

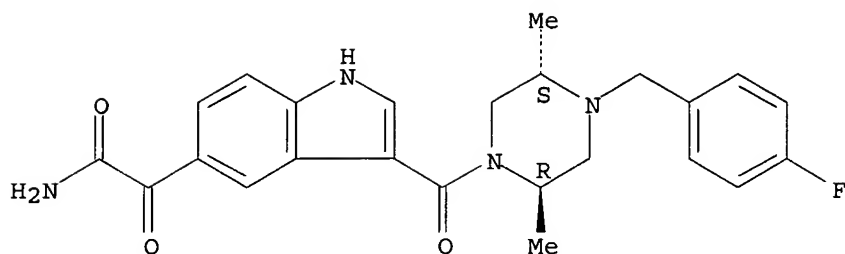
Relative stereochemistry.



RN 431061-58-4 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

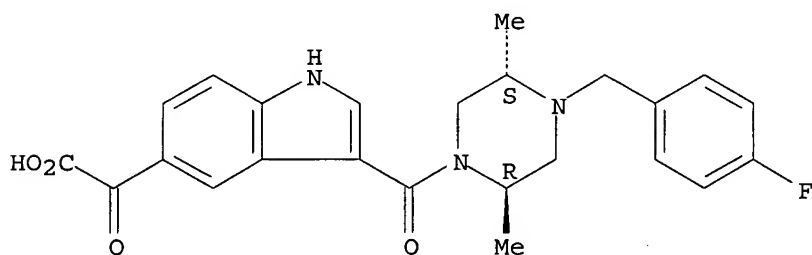
Relative stereochemistry.



RN 431061-59-5 CAPLUS

CN 1H-Indole-5-acetic acid, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-α-oxo-, rel- (9CI) (CA INDEX NAME)

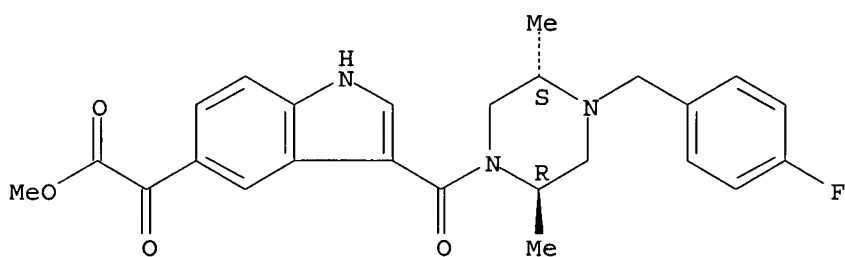
Relative stereochemistry.



RN 431061-60-8 CAPLUS

CN 1H-Indole-5-acetic acid, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-α-oxo-, methyl ester, rel- (9CI) (CA INDEX NAME)

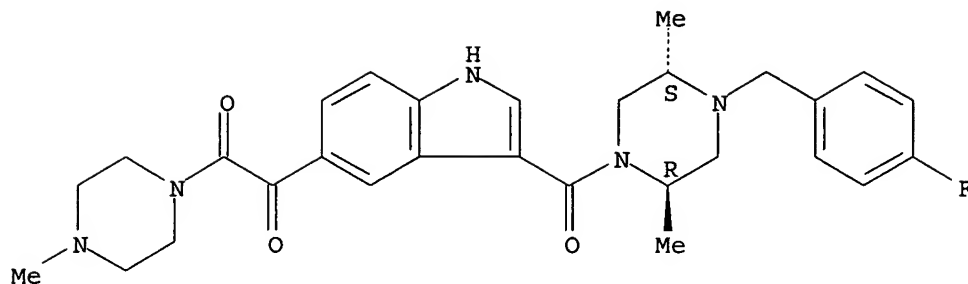
Relative stereochemistry.



RN 431061-61-9 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-2,5-dimethyl-4-[[5-[(4-methyl-1-piperazinyl)oxoacetyl]-1H-indol-3-yl]carbonyl]-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

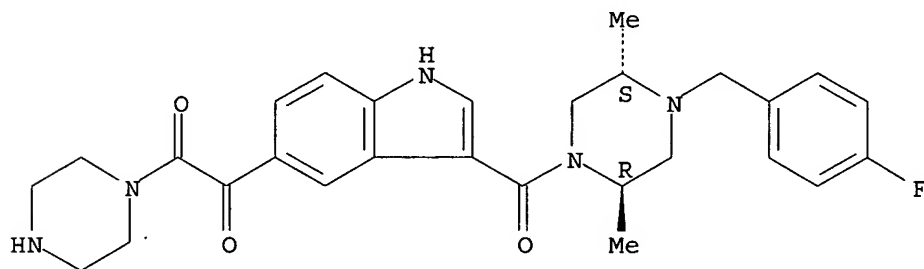
Relative stereochemistry.



RN 431061-62-0 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-2,5-dimethyl-4-[[5-(oxo-1-piperazinylacetyl)-1H-indol-3-yl]carbonyl]-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

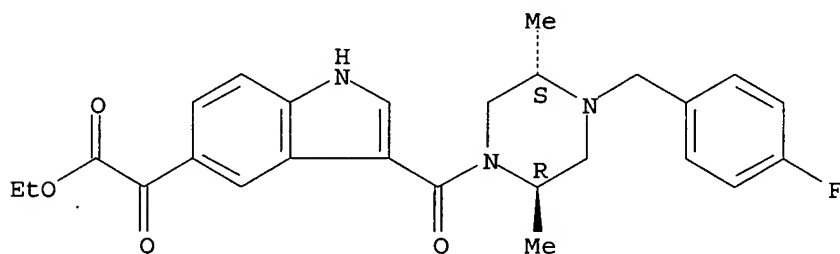
Relative stereochemistry.



RN 431061-63-1 CAPLUS

CN 1H-Indole-5-acetic acid, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-alpha-oxo-, ethyl ester, rel- (9CI) (CA INDEX NAME)

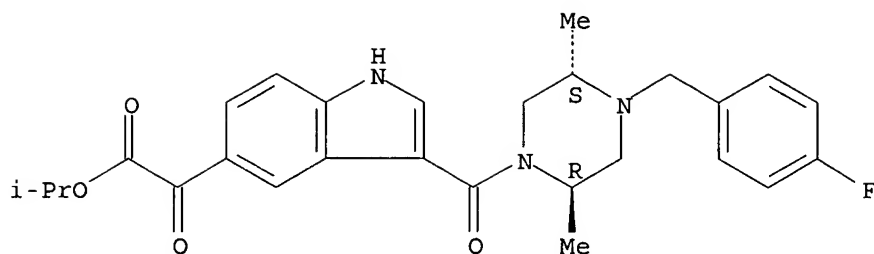
Relative stereochemistry.



RN 431061-64-2 CAPLUS

CN 1H-Indole-5-acetic acid, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-alpha-oxo-, 1-methylethyl ester, rel- (9CI) (CA INDEX NAME)

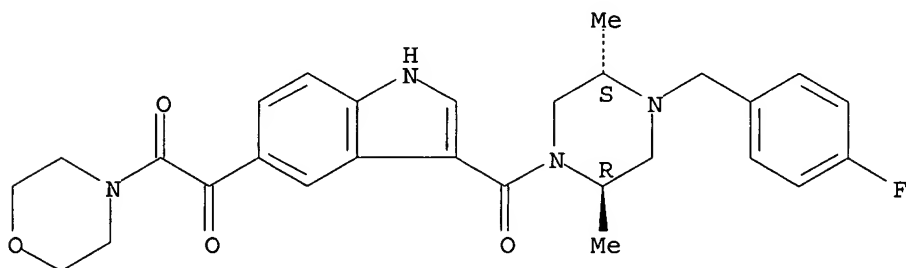
Relative stereochemistry.



RN 431061-65-3 CAPLUS

CN Morpholine, 4-[[3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1H-indol-5-yl]oxoacetyl]-, rel- (9CI) (CA INDEX NAME)

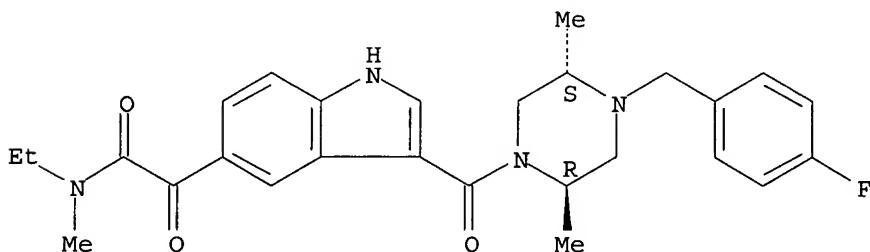
Relative stereochemistry.



RN 431061-66-4 CAPLUS

CN 1H-Indole-5-acetamide, N-ethyl-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N-methyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

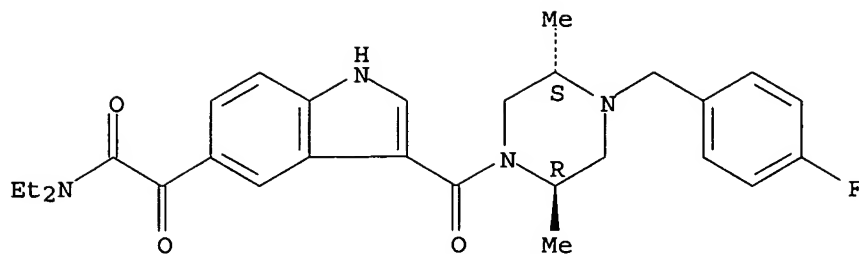
Relative stereochemistry.



RN 431061-67-5 CAPLUS

CN 1H-Indole-5-acetamide, N,N-diethyl-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

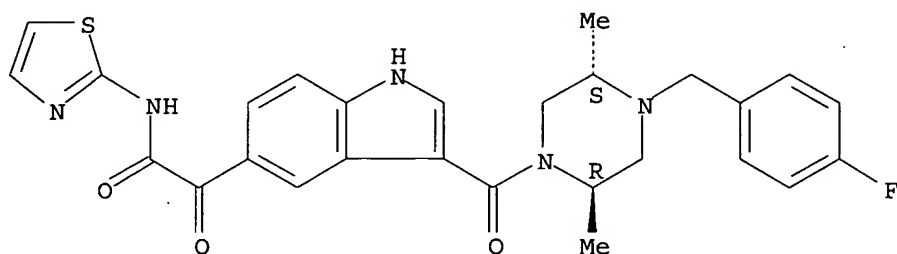
Relative stereochemistry.



RN 431061-68-6 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-α-oxo-N-2-thiazolyl-, rel- (9CI) (CA INDEX NAME)

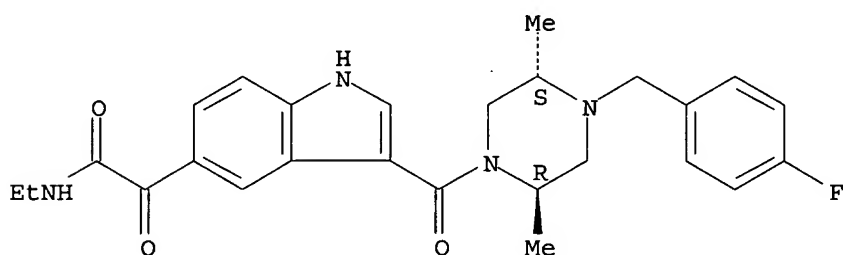
Relative stereochemistry.



RN 431061-69-7 CAPLUS

CN 1H-Indole-5-acetamide, N-ethyl-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-α-oxo-, rel- (9CI) (CA INDEX NAME)

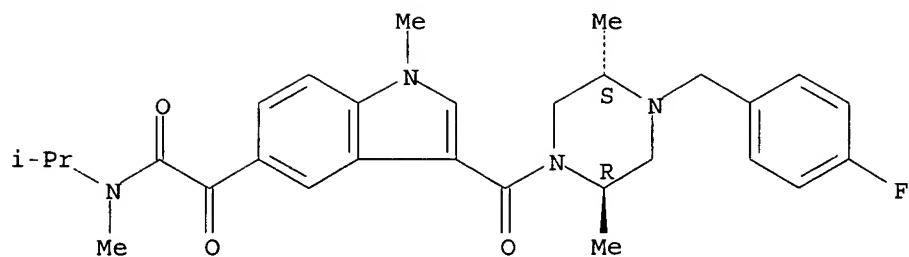
Relative stereochemistry.



RN 431061-70-0 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,1-dimethyl-N-(1-methylethyl)-α-oxo-, rel- (9CI) (CA INDEX NAME)

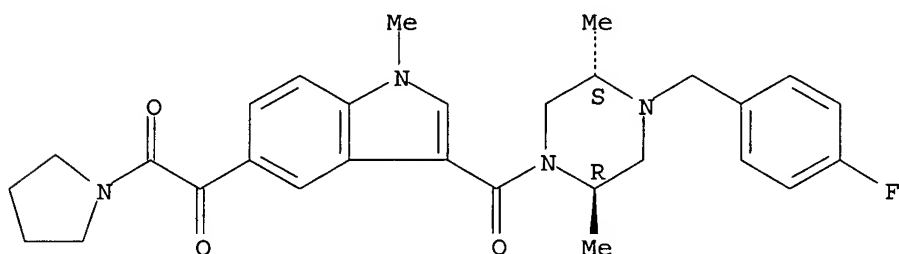
Relative stereochemistry.



RN 431061-71-1 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-2,5-dimethyl-4-[[1-methyl-5-[oxo(1-pyrrolidinyl)acetyl]-1H-indol-3-yl]carbonyl]-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

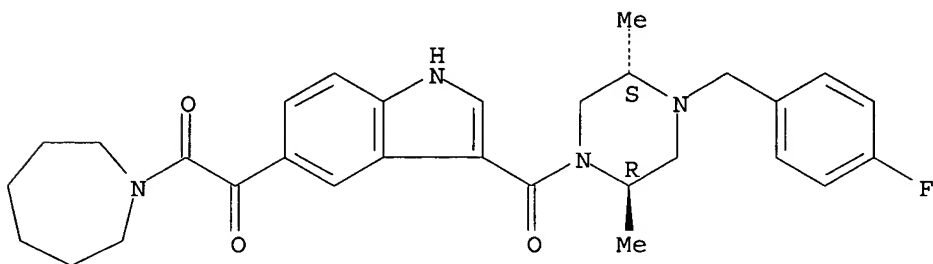
Relative stereochemistry.



RN 431061-72-2 CAPLUS

CN 1H-Azepine, 1-[[3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1H-indol-5-yl]oxoacetyl]hexahydro-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

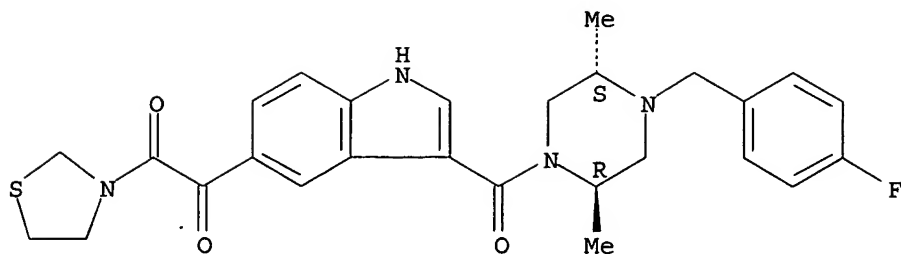


RN 431061-73-3 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-2,5-dimethyl-4-[[5-[oxo(3-thiazolidinyl)acetyl]-1H-indol-3-yl]carbonyl]-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

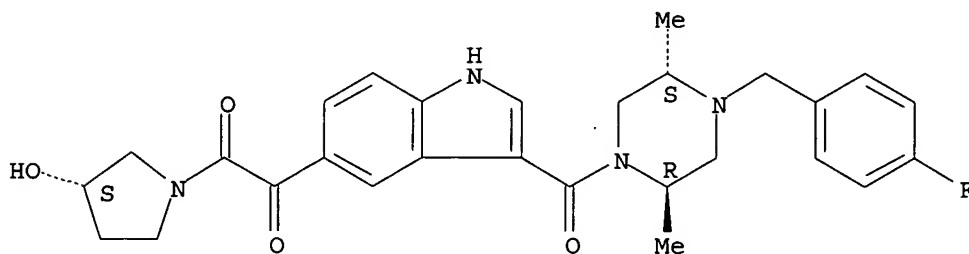




RN 431061-74-4 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-4-[[5-[[[(3R)-3-hydroxy-1-pyrrolidinyl]oxoacetyl]-1H-indol-3-yl]carbonyl]-2,5-dimethyl-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

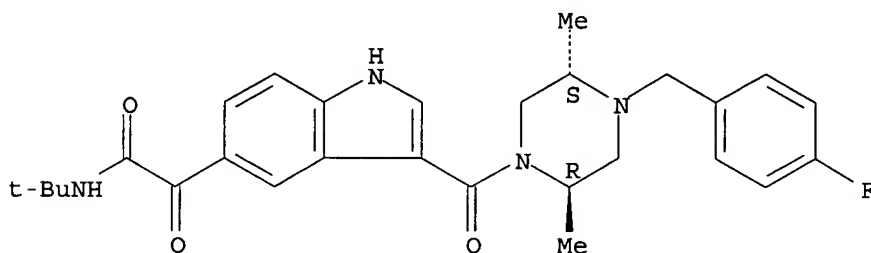
Absolute stereochemistry.



RN 431061-75-5 CAPLUS

CN 1H-Indole-5-acetamide, N-(1,1-dimethylethyl)-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-α-oxo-, rel- (9CI) (CA INDEX NAME)

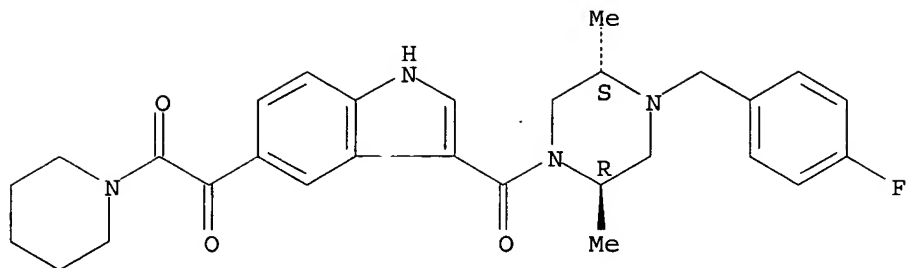
Relative stereochemistry.



RN 431061-76-6 CAPLUS

CN Piperazine, 1-[(4-fluorophenyl)methyl]-2,5-dimethyl-4-[[5-[oxo(1-piperidinyl)acetyl]-1H-indol-3-yl]carbonyl]-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

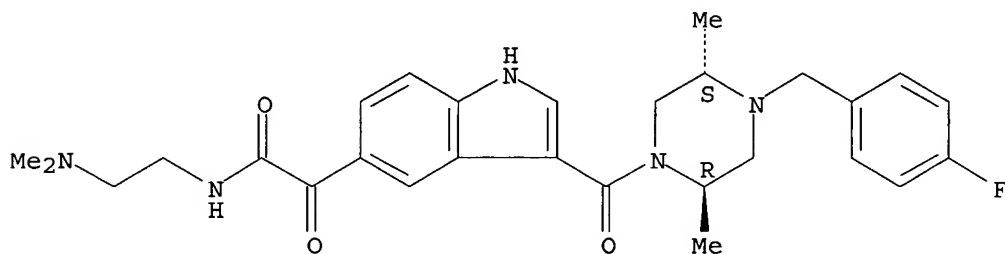
Relative stereochemistry.



RN 431061-77-7 CAPLUS

CN 1H-Indole-5-acetamide, N-[2-(dimethylamino)ethyl]-3-[[2,5-dimethyl-1-piperazinyl]carbonyl]- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

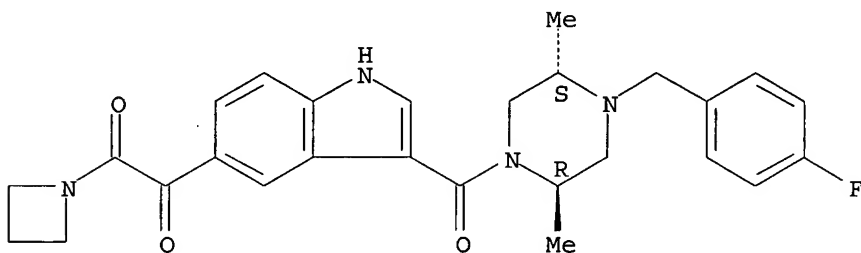
Relative stereochemistry.



RN 431061-78-8 CAPLUS

CN Piperazine, 1-[[5-[(1-azetidinyloxyacetyl)-1H-indol-3-yl]carbonyl]-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

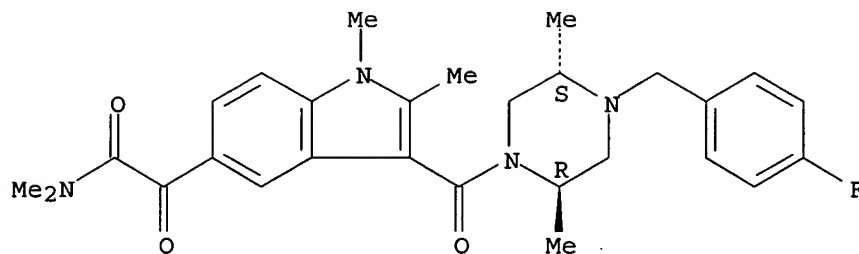
Relative stereochemistry.



RN 431061-79-9 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1,2-tetramethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

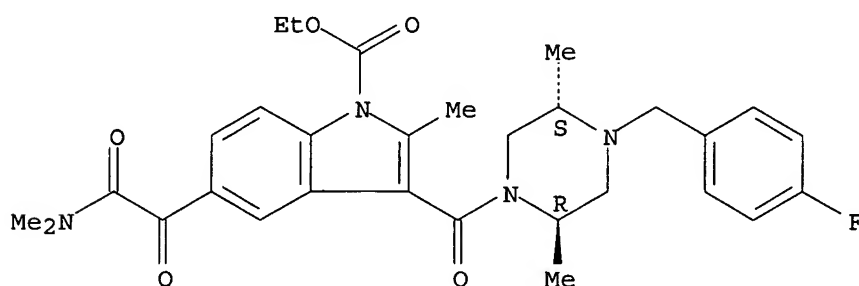
Relative stereochemistry.



RN 431061-80-2 CAPLUS

CN 1H-Indole-1-carboxylic acid, 5-[(dimethylamino)oxoacetyl]-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl-, ethyl ester, rel- (9CI) (CA INDEX NAME)

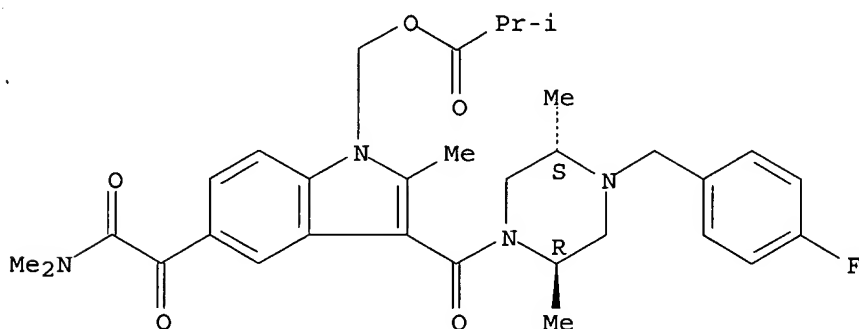
Relative stereochemistry.



RN 431061-81-3 CAPLUS

CN Propanoic acid, 2-methyl-, [5-[(dimethylamino)oxoacetyl]-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-2-methyl-1H-indol-1-yl]methyl ester, rel- (9CI) (CA INDEX NAME)

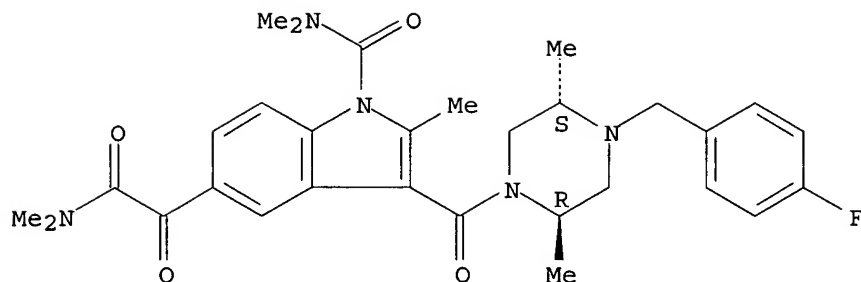
Relative stereochemistry.



RN 431061-82-4 CAPLUS

CN 1H-Indole-5-acetamide, 1-[(dimethylamino)carbonyl]-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,2-trimethyl-α-oxo-, rel- (9CI) (CA INDEX NAME)

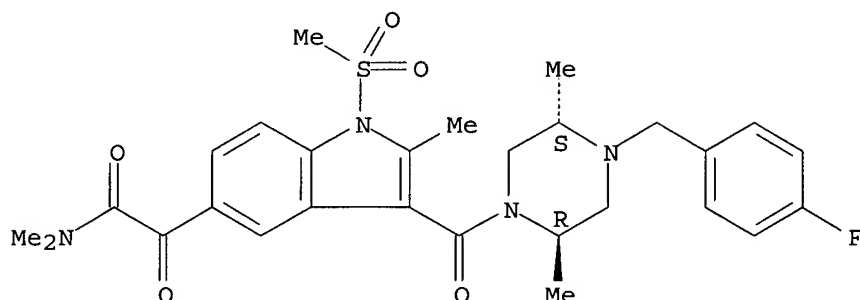
Relative stereochemistry.



RN 431061-83-5 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,2-trimethyl-1-(methanesulfonyl)- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

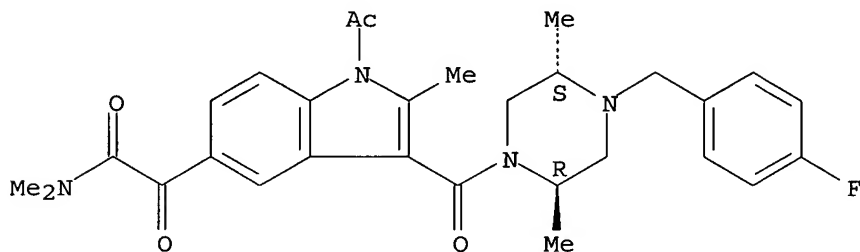
Relative stereochemistry.



RN 431061-84-6 CAPLUS

CN 1H-Indole-5-acetamide, 1-acetyl-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,2-trimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

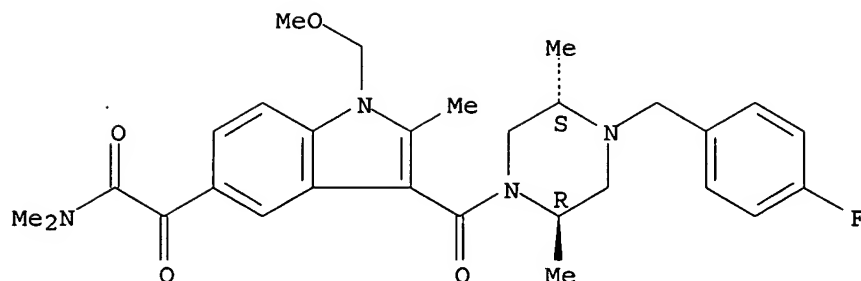
Relative stereochemistry.



RN 431061-85-7 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-(methoxymethyl)-N,N,2-trimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

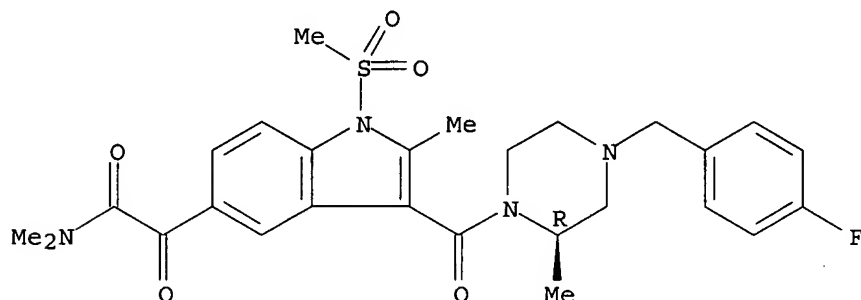
Relative stereochemistry.



RN 431061-86-8 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R)-4-[(4-fluorophenyl)methyl]-2-methyl-1-piperazinyl]carbonyl]-N,N,2-trimethyl-1-(methylsulfonyl)- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

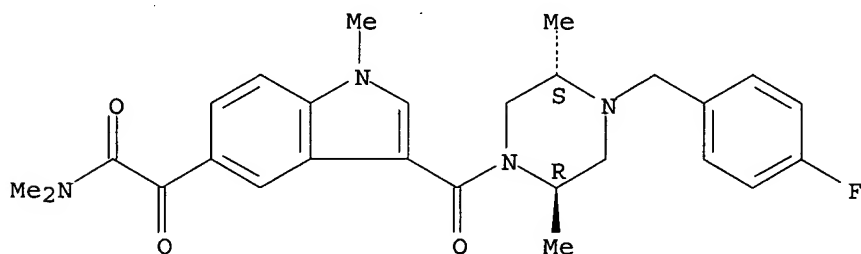
Absolute stereochemistry.



RN 431061-87-9 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

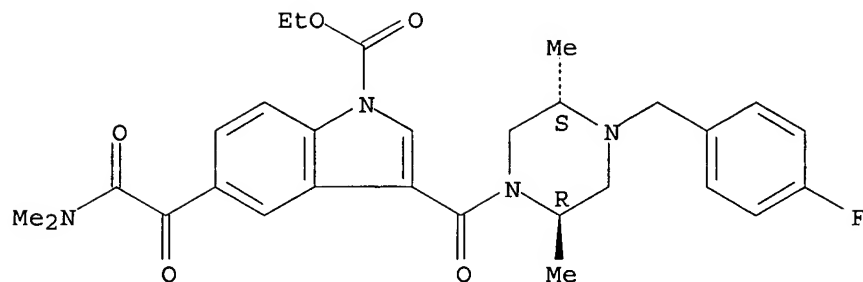
Relative stereochemistry.



RN 431061-88-0 CAPLUS

CN 1H-Indole-1-carboxylic acid, 5-[(dimethylamino)oxoacetyl]-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-, ethyl ester, rel- (9CI) (CA INDEX NAME)

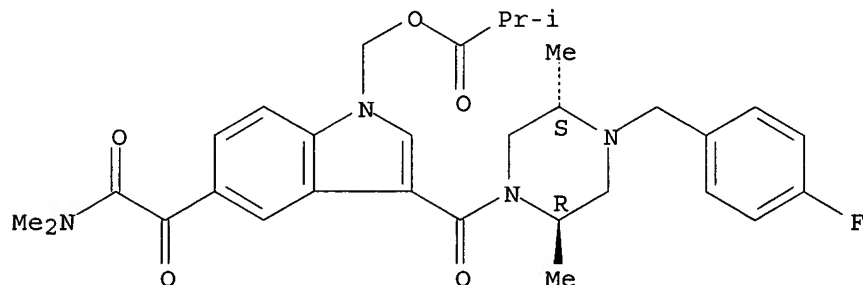
Relative stereochemistry.



RN 431061-89-1 CAPLUS

CN Propanoic acid, 2-methyl-, [5-[(dimethylamino)oxoacetyl]-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1H-indol-1-yl]methyl ester, rel- (9CI) (CA INDEX NAME)

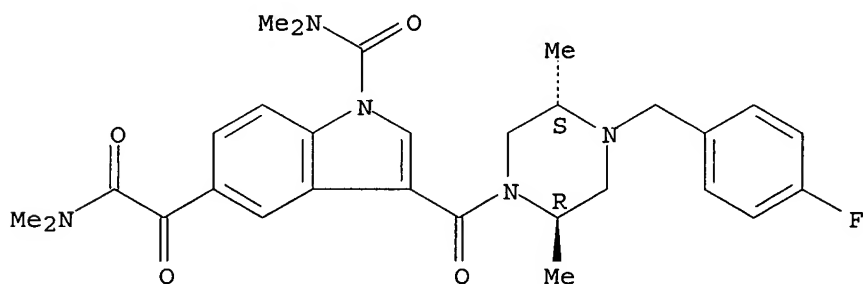
Relative stereochemistry.



RN 431061-90-4 CAPLUS

CN 1H-Indole-5-acetamide, 1-[(dimethylamino)carbonyl]-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl-α-oxo-, rel- (9CI) (CA INDEX NAME)

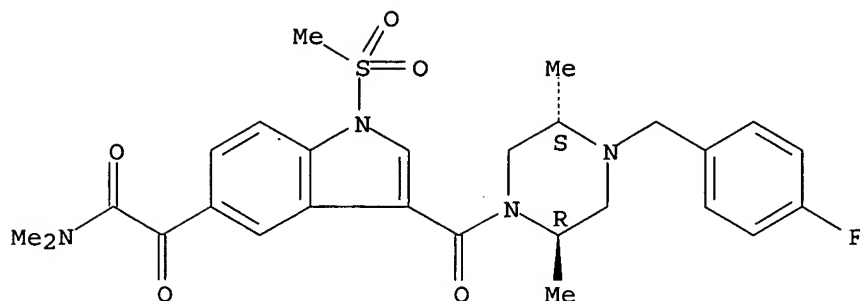
Relative stereochemistry.



RN 431061-91-5 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl-1-(methylsulfonyl)-α-oxo-, rel- (9CI) (CA INDEX NAME)

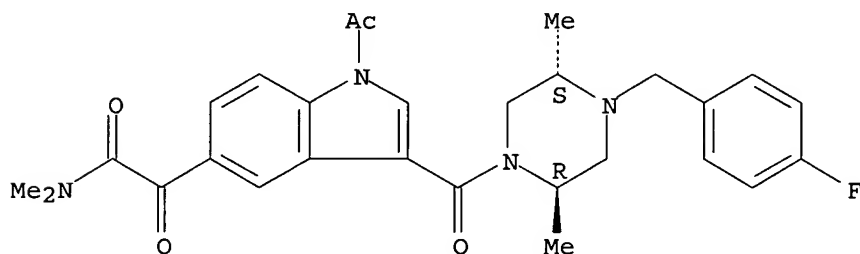
Relative stereochemistry.



RN 431061-92-6 CAPLUS

CN 1H-Indole-5-acetamide, 1-acetyl-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl-α-oxo-, rel- (9CI)  
(CA INDEX NAME)

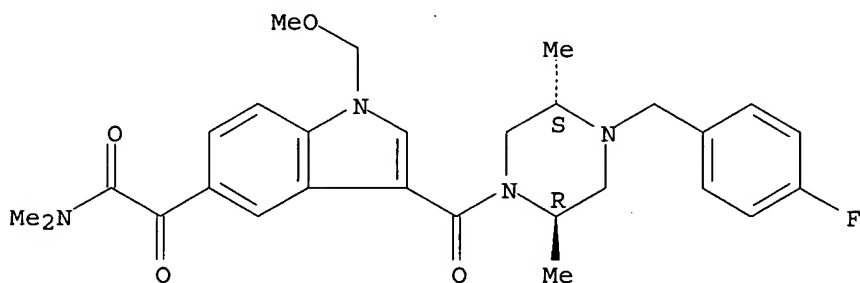
Relative stereochemistry.



RN 431061-93-7 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-(methoxymethyl)-N,N-dimethyl-α-oxo-, rel- (9CI) (CA INDEX NAME)

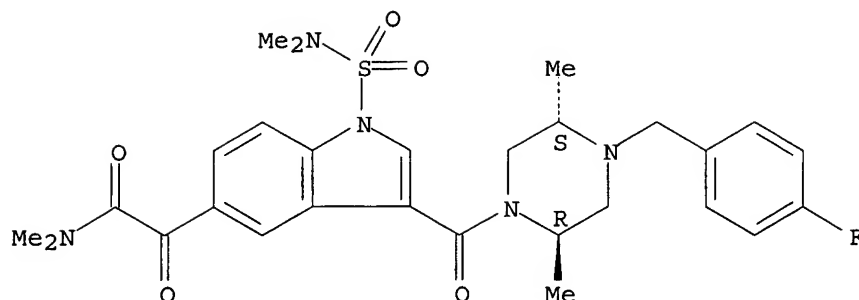
Relative stereochemistry.



RN 431061-94-8 CAPLUS

CN 1H-Indole-5-acetamide, 1-[(dimethylamino)sulfonyl]-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl-α-oxo-, rel- (9CI) (CA INDEX NAME)

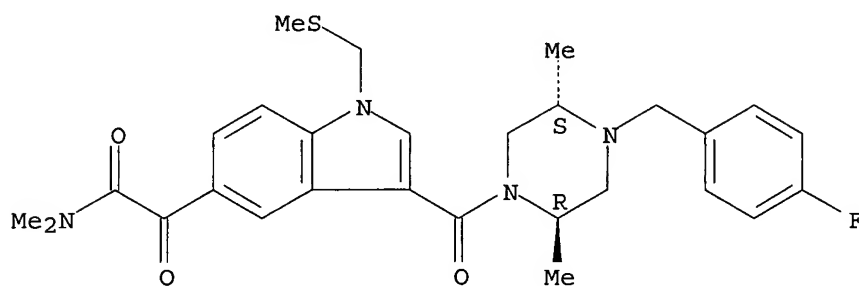
Relative stereochemistry.



RN 431061-95-9 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl-1-[(methylthio)methyl]-α-oxo-, rel- (9CI) (CA INDEX NAME)

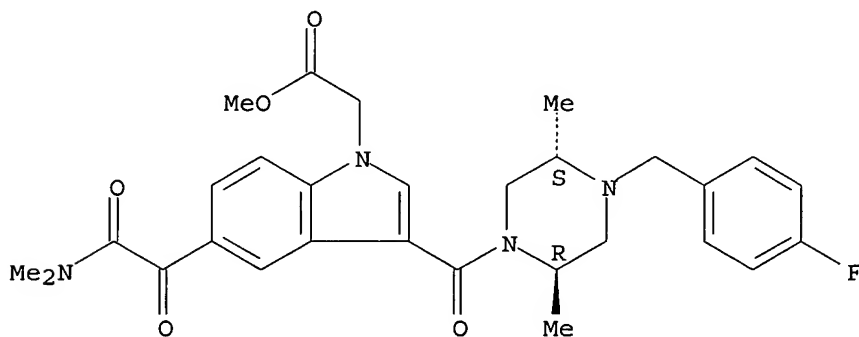
Relative stereochemistry.



RN 431061-96-0 CAPLUS

CN 1H-Indole-1-acetic acid, 5-[(dimethylamino)oxoacetyl]-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-, methyl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

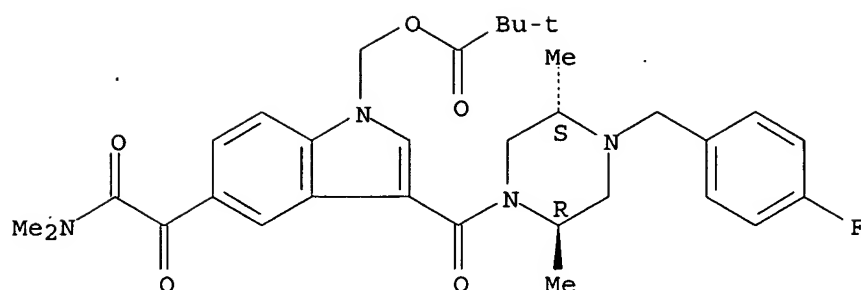


RN 431061-97-1 CAPLUS

CN Propanoic acid, 2,2-dimethyl-, [5-[(dimethylamino)oxoacetyl]-3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1H-indol-1-yl]methyl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

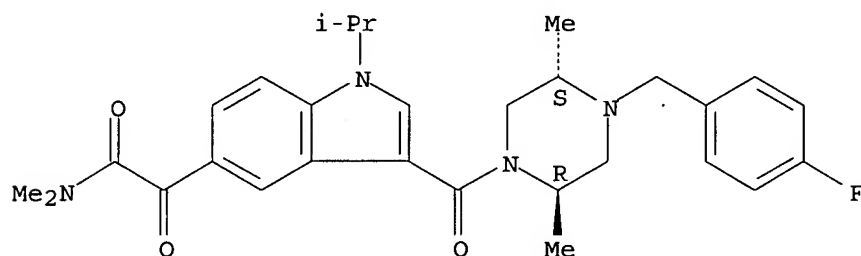




RN 431061-98-2 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl-1-(1-methylethyl)- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

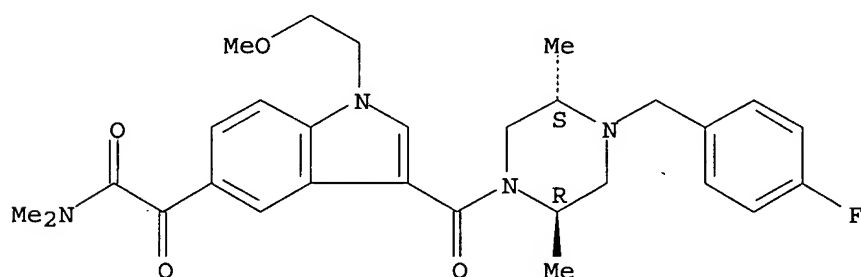
Relative stereochemistry.



RN 431061-99-3 CAPLUS

CN 1H-Indole-5-acetamide, 3-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-(2-methoxyethyl)-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

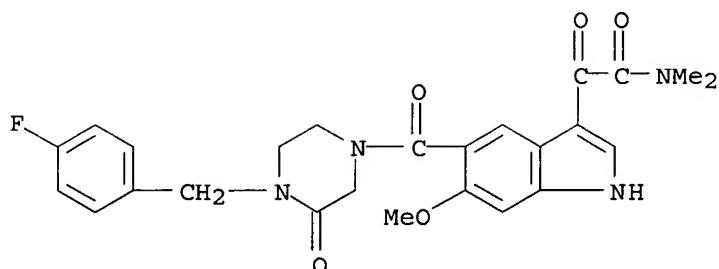


IT 309915-14-8

RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of piperidinylcarbonyl- and piperazinylcarbonylindolylglyoxylates and -amides as inhibitors of p38- $\alpha$  kinase)

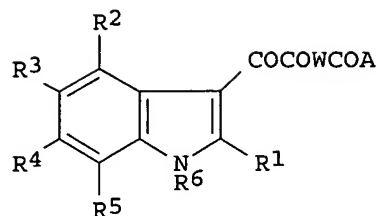
RN 309915-14-8 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-3-oxo-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



L24 ANSWER 12 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN  
 ACCESSION NUMBER: 2002:51452 CAPLUS  
 DOCUMENT NUMBER: 136:118470  
 TITLE: Preparation of substituted indoleoxoacetyl piperazines with antiviral activity against HIV-1  
 INVENTOR(S): Wallace, Owen B.; Wang, Tao; Yeung, Kap-Sun; Pearce, Bradley C.; Meanwell, Nicholas A.; Qiu, Zhilei; Fang, Haiquan; Xue, Qiufen May; Yin, Zhiwei  
 PATENT ASSIGNEE(S): Bristol-Myers Squibb Company, USA  
 SOURCE: PCT Int. Appl., 277 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

| PATENT NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | KIND | DATE     | APPLICATION NO.   | DATE       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|----------|-------------------|------------|
| WO 2002004440                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | A1   | 20020117 | WO 2001-US20300   | 20010626   |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM<br>RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG |      |          |                   |            |
| CA 2413044                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | AA   | 20020117 | CA 2001-2413044   | 20010626   |
| EP 1299382                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | A1   | 20030409 | EP 2001-946715    | 20010626   |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |      |          |                   |            |
| JP 2004502768                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | T2   | 20040129 | JP 2002-509305    | 20010626   |
| PRIORITY APPLN. INFO.:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |      |          | US 2000-217444P   | P 20000710 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |          | US 2001-265978P   | P 20010202 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |      |          | WO 2001-US20300   | W 20010626 |
| OTHER SOURCE(S):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |      |          | MARPAT 136:118470 |            |
| GI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |          |                   |            |



I

AB Indoleoxoacetyl piperazines I [A = (un)substituted alkoxy, aryl, heteroaryl; W = (un)substituted piperazino; R1 = H; R2-R5 = H, halogen, CN, NO2, (un)substituted NH2, OH, (un)substituted alkyl, cycloalkyl, alkoxy, CO2H, acyl, carbamoyl, amidino, aryl, heteroaryl, heterocyclic; R6 = H, alkyl] and their 2,3-dihydroindole analogs were prepared for use as virucides in the treatment of HIV and AIDS. Thus, 2-bromo-5-fluoronitrobenzene was cyclized with CH2:CHMgBr to give 4-fluoro-7-bromoindole, which was treated with ClCOCO2Et, followed by ester hydrolysis to give 4-fluoro-7-bromo-3-indoleglyoxylic acid. This acid was amidated with N-benzoylpiperazine and treated with PhSnBu3 to give I [A = R5 = Ph, W = piperazino, R1, R3, R4, R6 = H, R2 = F]. This compound gave >98% inhibition of HIV-1 infection in HeLa cells.

IT 389629-30-5P

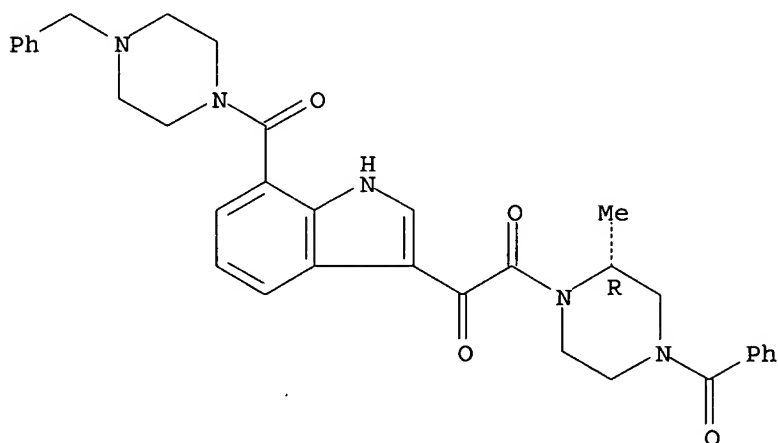
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of substituted indoleoxoacetyl piperazines with antiviral activity against HIV-1)

RN 389629-30-5 CAPLUS

CN Piperazine, 4-benzoyl-2-methyl-1-[oxo[7-[[4-(phenylmethyl)-1-piperazinyl]carbonyl]-1H-indol-3-yl]acetyl]-, (2R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L24 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2005 ACS on STN

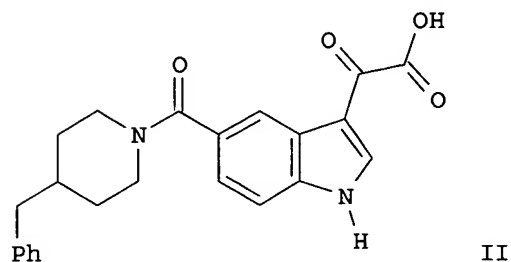
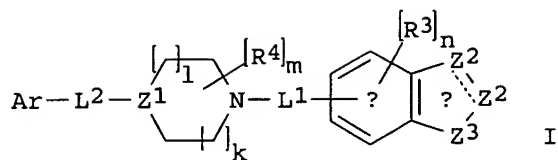
ACCESSION NUMBER: 2000:842127 CAPLUS

DOCUMENT NUMBER: 134:17503

TITLE: Preparation of 5-[4-benzylpiperidinyl(piperazinyl)]-indolecarboxamides as inhibitors of p38 kinase  
 INVENTOR(S): Mavunkel, Babu J.; Chakravarty, Sarvajit; Perumattam, John J.; Dugar, Sundeep; Lu, Qing; Liang, Xi  
 PATENT ASSIGNEE(S): Scios Inc., USA  
 SOURCE: PCT Int. Appl., 85 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 7  
 PATENT INFORMATION:

| PATENT NO.             | KIND                                                                                                                                                                                                                                                                                                                                                       | DATE     | APPLICATION NO. | DATE        |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------|-------------|
| WO 2000071535          | A1                                                                                                                                                                                                                                                                                                                                                         | 20001130 | WO 2000-US14003 | 20000519    |
| W:                     | AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM |          |                 |             |
| RW:                    | GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG                                                                                                                                                                         |          |                 |             |
| US 6589954             | B1                                                                                                                                                                                                                                                                                                                                                         | 20030708 | US 1999-316761  | 19990521    |
| CA 2372567             | AA                                                                                                                                                                                                                                                                                                                                                         | 20001130 | CA 2000-2372567 | 20000519    |
| EP 1178983             | A1                                                                                                                                                                                                                                                                                                                                                         | 20020213 | EP 2000-939322  | 20000519    |
| R:                     | AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO                                                                                                                                                                                                                                                                     |          |                 |             |
| BR 2000011274          | A                                                                                                                                                                                                                                                                                                                                                          | 20020226 | BR 2000-11274   | 20000519    |
| NZ 515285              | A                                                                                                                                                                                                                                                                                                                                                          | 20040130 | NZ 2000-515285  | 20000519    |
| AU 772295              | B2                                                                                                                                                                                                                                                                                                                                                         | 20040422 | AU 2000-54424   | 20000519    |
| BG 106091              | A                                                                                                                                                                                                                                                                                                                                                          | 20020628 | BG 2001-106091  | 20011108    |
| HR 2001000854          | A1                                                                                                                                                                                                                                                                                                                                                         | 20030430 | HR 2001-854     | 20011119    |
| NO 2001005655          | A                                                                                                                                                                                                                                                                                                                                                          | 20020118 | NO 2001-5655    | 20011120    |
| PRIORITY APPLN. INFO.: |                                                                                                                                                                                                                                                                                                                                                            |          | US 1999-316761  | A 19990521  |
|                        |                                                                                                                                                                                                                                                                                                                                                            |          | US 1999-154594P | P 19990917  |
|                        |                                                                                                                                                                                                                                                                                                                                                            |          | US 2000-202608P | P 20000509  |
|                        |                                                                                                                                                                                                                                                                                                                                                            |          | US 1998-86531P  | P 19980522  |
|                        |                                                                                                                                                                                                                                                                                                                                                            |          | US 1998-128137  | A2 19980803 |
|                        |                                                                                                                                                                                                                                                                                                                                                            |          | US 1999-275176  | A2 19990324 |
|                        |                                                                                                                                                                                                                                                                                                                                                            |          | WO 2000-US14003 | W 20000519  |

OTHER SOURCE(S): MARPAT 134:17503  
 GI



AB The title compds. [I; one Z2 = CA, CR8A and the other = CR1, CR12, NR6, N (wherein R1, R6, R8 = H, noninterfering substituent; A = WiCOXjY; Y = COR2, an isostere; R2 = H, noninterfering substituent; W, X = spacer of 2-6Å; i, j = 0-1); Z3 = NR7, O; R3 = noninterfering substituent; n = 0-3; L1, L2 = linker; R4 = noninterfering substituent; m = 0-4; Z1 = CR5, N (R5 = H, noninterfering substituent); l, k = 0-2, wherein the sum of l and k = 0-3; Ar = aryl substituted with 0-5 noninterfering substituents, wherein two noninterfering substituents can form a fused ring; the distance between the atom of Ar linked to L2 and the center of the α ring is 4.5-24Å] which inhibit p38-α kinase (biol. data given), were prepared Thus, treating 6-methoxy-(4-benzylpiperidinyl)-indole-5-carboxamide with oxalyl chloride in CH2Cl2 afforded the indole-5-carboxamide II.

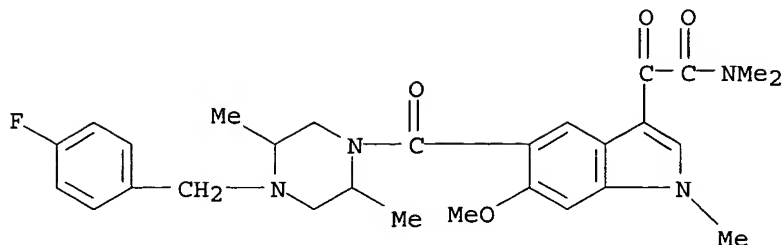
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 309914-96-3P 309914-97-4P 309914-98-5P  
 309915-01-3P 309915-02-4P 309915-04-6P  
 309915-12-6P 309915-13-7P 309915-14-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of 5-[4-benzylpiperidinyl(piperazinyl)]-indolecarboxamides as inhibitors of p38 kinase)

RN 309913-41-5 CAPLUS

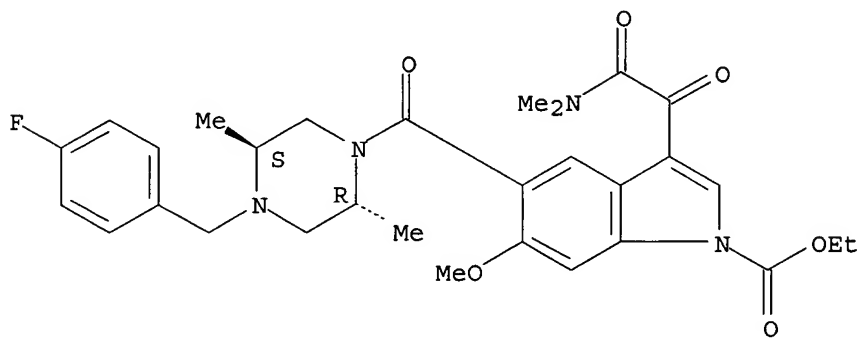
CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,1-trimethyl-α-oxo- (9CI) (CA INDEX NAME)



RN 309913-43-7 CAPLUS

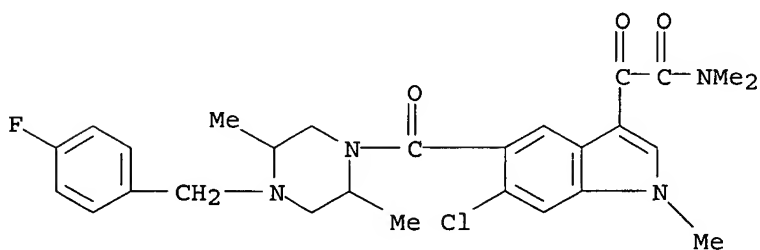
CN 1H-Indole-1-carboxylic acid, 3-[(dimethylamino)oxoacetyl]-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-, ethyl ester, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



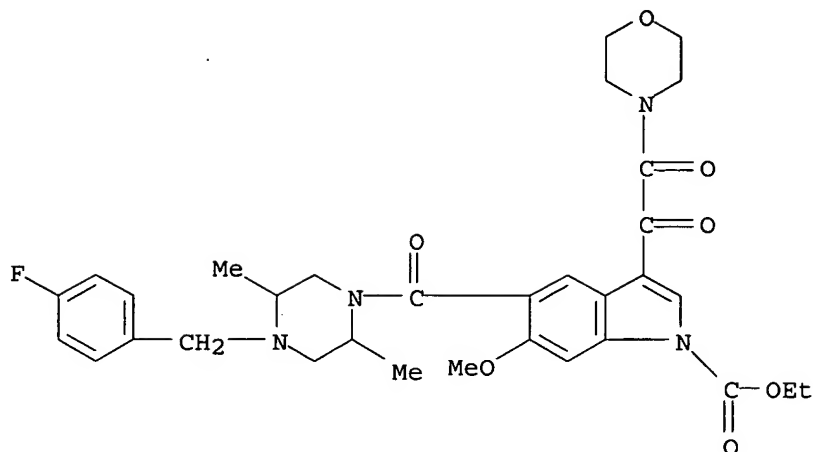
RN 309913-59-5 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl-α-oxo- (9CI) (CA INDEX NAME)



RN 309913-60-8 CAPLUS

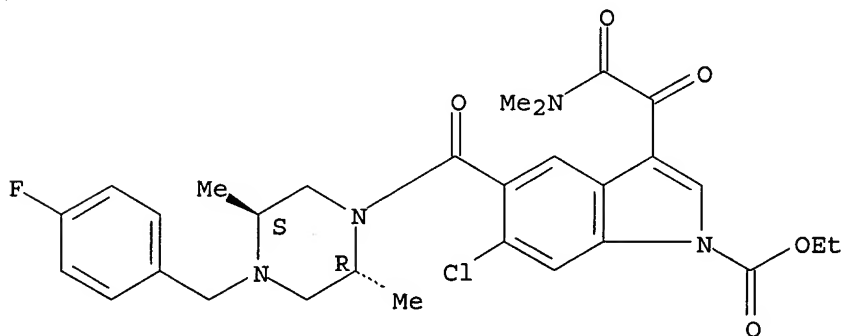
CN 1H-Indole-1-carboxylic acid, 5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-3-(4-morpholinyl)oxoacetyl-, ethyl ester (9CI) (CA INDEX NAME)



RN 309913-64-2 CAPLUS

CN 1H-Indole-1-carboxylic acid, 6-chloro-3-[(dimethylamino)oxoacetyl]-5-  
 [[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-  
 , ethyl ester, rel- (9CI) (CA INDEX NAME)

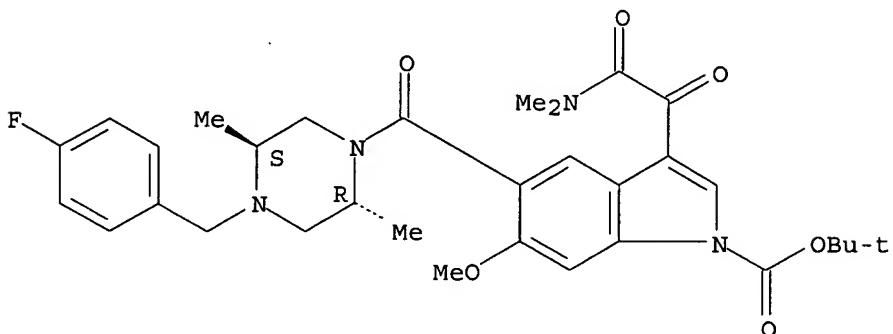
Relative stereochemistry.



RN 309913-71-1 CAPLUS

CN 1H-Indole-1-carboxylic acid, 3-[(dimethylamino)oxoacetyl]-5-[[ (2R,5S)-4-  
 [(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-,  
 1,1-dimethylethyl ester, rel- (9CI) (CA INDEX NAME)

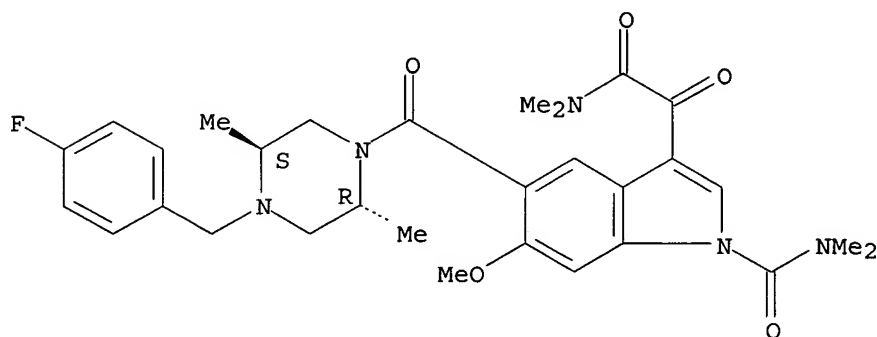
Relative stereochemistry.



RN 309913-72-2 CAPLUS

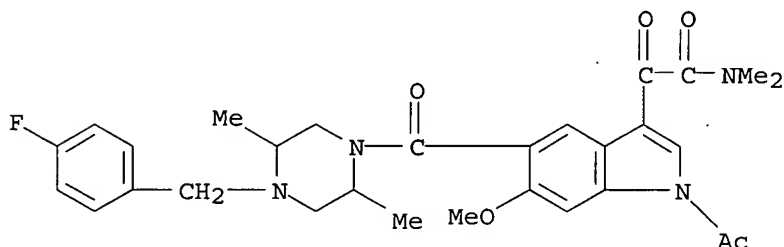
CN 1H-Indole-3-acetamide, 1-[(dimethylamino)carbonyl]-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 309913-73-3 CAPLUS

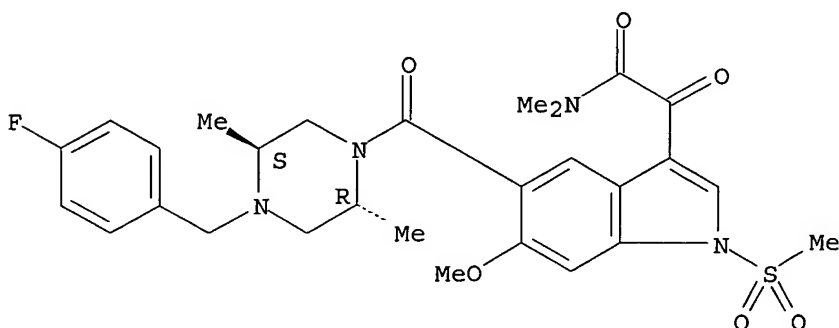
CN 1H-Indole-3-acetamide, 1-acetyl-5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



RN 309913-74-4 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl-1-(methylsulfonyl)- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

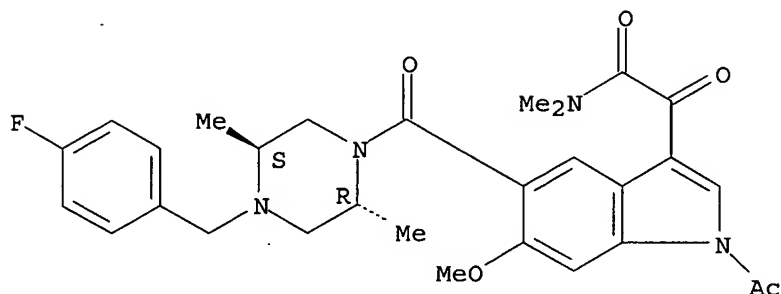
Relative stereochemistry.





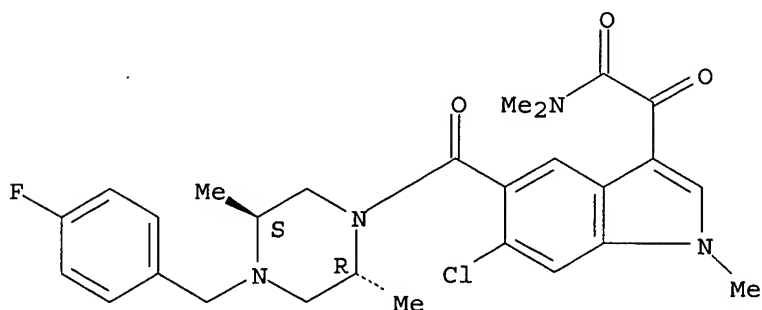
RN 309913-82-4 CAPLUS  
 CN 1H-Indole-3-acetamide, 1-acetyl-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



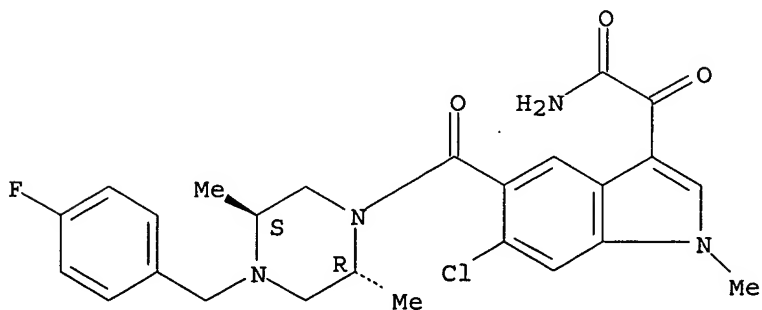
RN 309913-83-5 CAPLUS  
 CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 309913-85-7 CAPLUS  
 CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-methyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

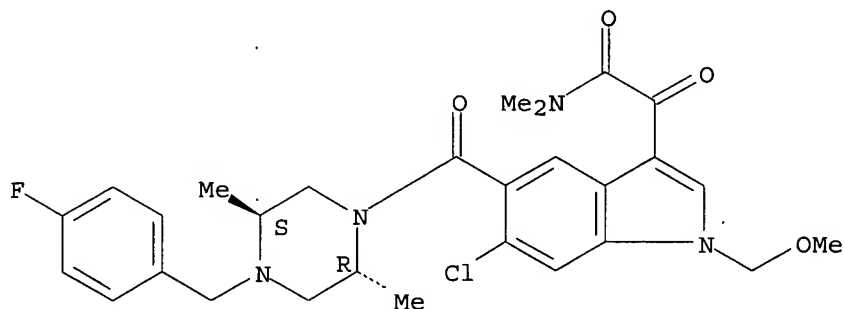
Relative stereochemistry.



RN 309913-88-0 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-(methoxymethyl)-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

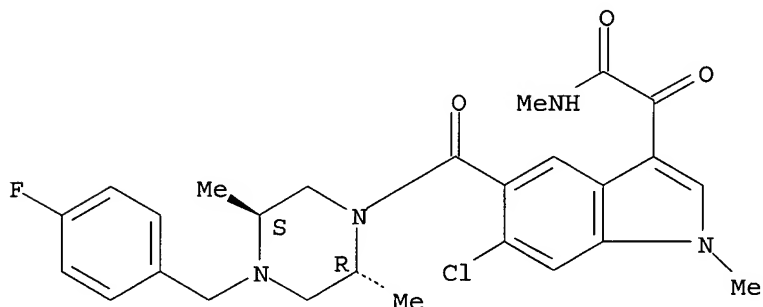
Relative stereochemistry.



RN 309914-02-1 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,1-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

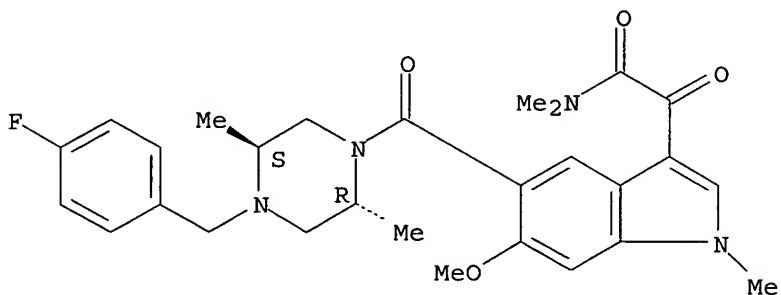
Relative stereochemistry.



RN 309914-14-5 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,1-trimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

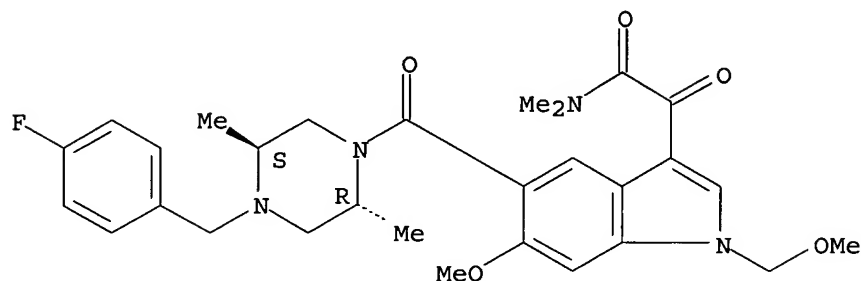
Absolute stereochemistry.



RN 309914-17-8 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1-(methoxymethyl)-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

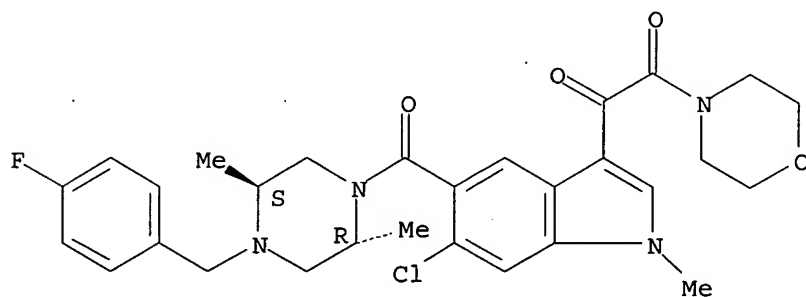
Absolute stereochemistry.



RN 309914-21-4 CAPLUS

CN Morpholine, 4-[[[6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1-methyl-1H-indol-3-yl]oxoacetyl]- (9CI) (CA INDEX NAME)

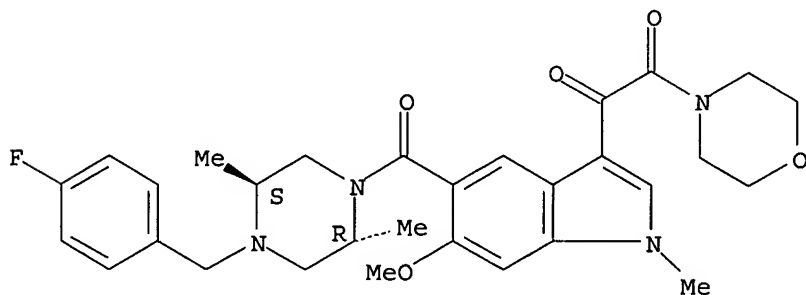
Absolute stereochemistry.



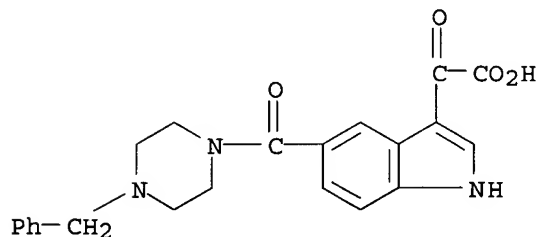
RN 309914-25-8 CAPLUS

CN Morpholine, 4-[[[5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1-methyl-1H-indol-3-yl]oxoacetyl]- (9CI) (CA INDEX NAME)

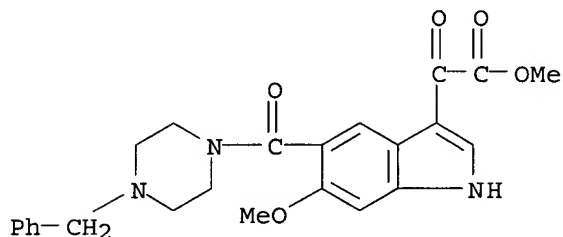
Absolute stereochemistry.



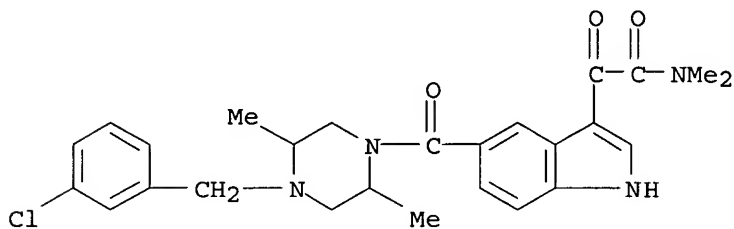
RN 309914-60-1 CAPLUS

CN 1H-Indole-3-acetic acid,  $\alpha$ -oxo-5-[[4-(phenylmethyl)-1-piperazinyl]carbonyl]- (9CI) (CA INDEX NAME)

RN 309914-62-3 CAPLUS

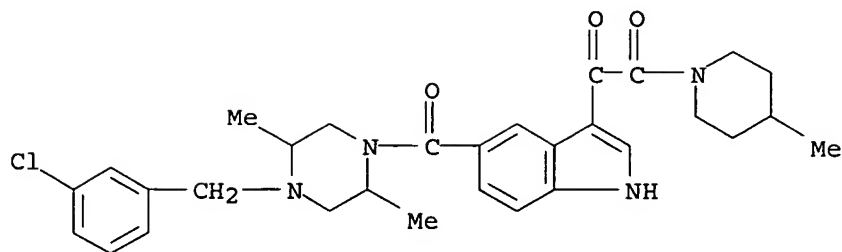
CN 1H-Indole-3-acetic acid, 6-methoxy- $\alpha$ -oxo-5-[[4-(phenylmethyl)-1-piperazinyl]carbonyl]-, methyl ester (9CI) (CA INDEX NAME)

RN 309914-71-4 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)

RN 309914-73-6 CAPLUS

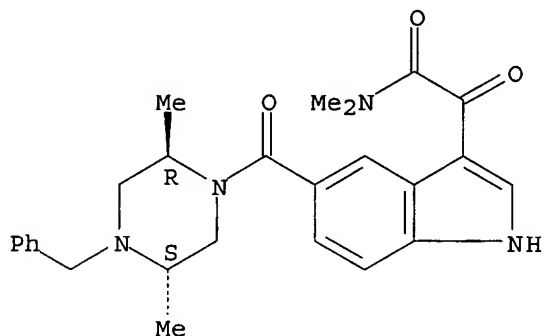
CN Piperazine, 1-[(3-chlorophenyl)methyl]-2,5-dimethyl-4-[[3-[(4-methyl-1-piperidinyl)oxoacetyl]-1H-indol-5-yl]carbonyl]- (9CI) (CA INDEX NAME)



RN 309914-77-0 CAPLUS

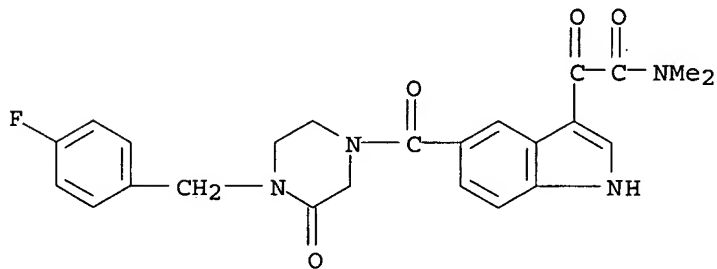
CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-2,5-dimethyl-4-(phenylmethyl)-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



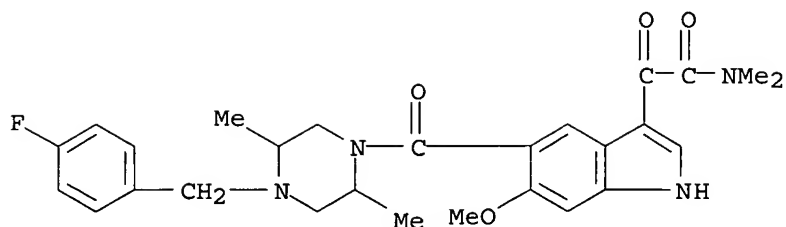
RN 309914-78-1 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-3-oxo-1-piperazinyl]carbonyl]-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



RN 309914-79-2 CAPLUS

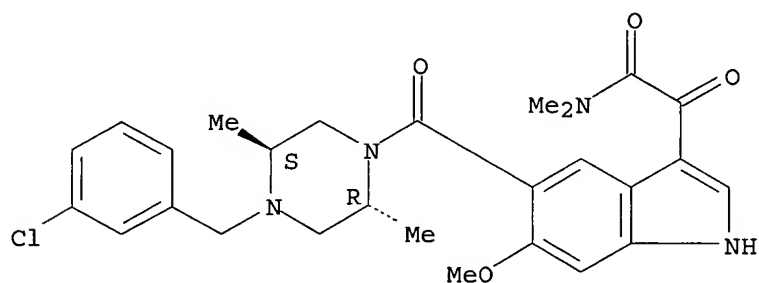
CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



RN 309914-80-5 CAPLUS

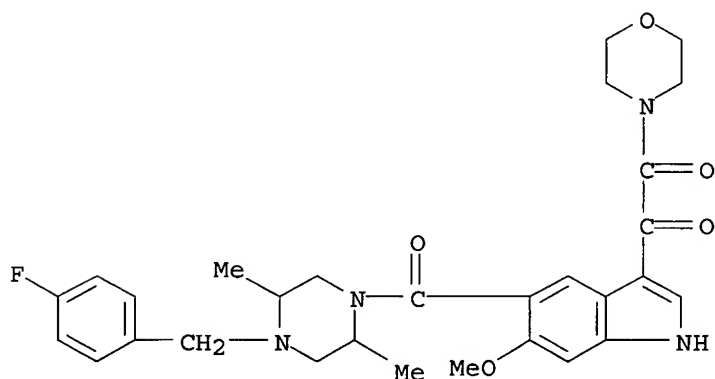
CN 1H-Indole-3-acetamide, 5-[[ (2R,5S)-4-[(3-chlorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl-α-oxo-, rel- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.



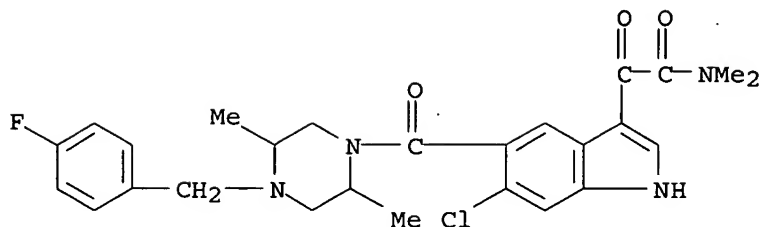
RN 309914-86-1 CAPLUS

CN Morpholine, 4-[[5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-1H-indol-3-yl]oxoacetyl]- (9CI) (CA INDEX NAME)



RN 309914-87-2 CAPLUS

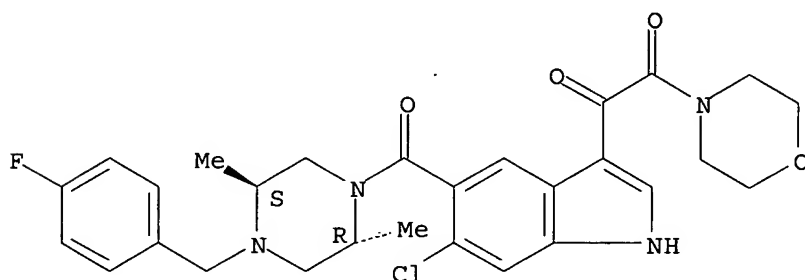
CN 1H-Indole-3-acetamide, 6-chloro-5-[[4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N-dimethyl-α-oxo- (9CI) (CA INDEX NAME)



RN 309914-89-4 CAPLUS

CN Morpholine, 4-[[6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-1H-indol-3-yl]oxoacetyl]-, rel- (9CI)  
(CA INDEX NAME)

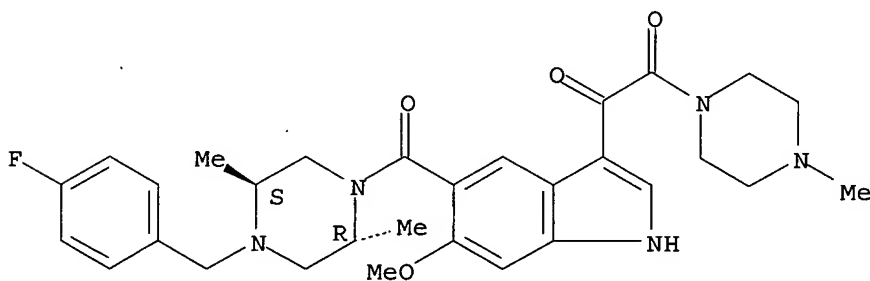
Relative stereochemistry.



RN 309914-95-2 CAPLUS

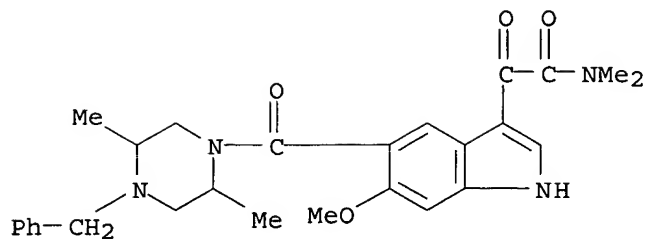
CN Piperazine, 1-[(4-fluorophenyl)methyl]-4-[[6-methoxy-3-[(4-methyl-1-piperazinyl)oxoacetyl]-1H-indol-5-yl]carbonyl]-2,5-dimethyl-, (2R,5S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 309914-96-3 CAPLUS

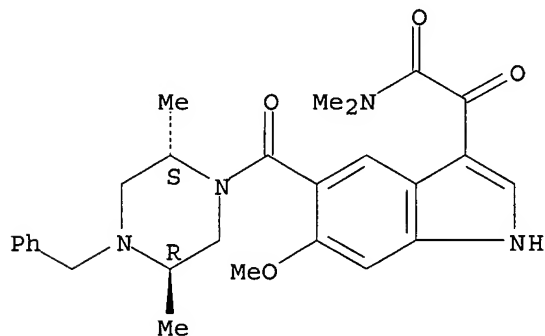
CN 1H-Indole-3-acetamide, 5-[[2,5-dimethyl-4-(phenylmethyl)-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl-α-oxo- (9CI) (CA INDEX NAME)



RN 309914-97-4 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2S,5R)-2,5-dimethyl-4-(phenylmethyl)-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl-α-oxo- (9CI) (CA INDEX NAME)

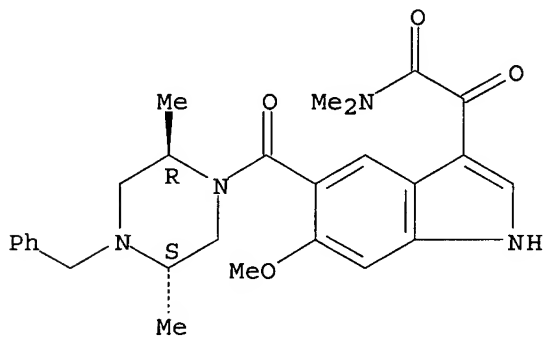
Absolute stereochemistry.



RN 309914-98-5 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-2,5-dimethyl-4-(phenylmethyl)-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl-α-oxo- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

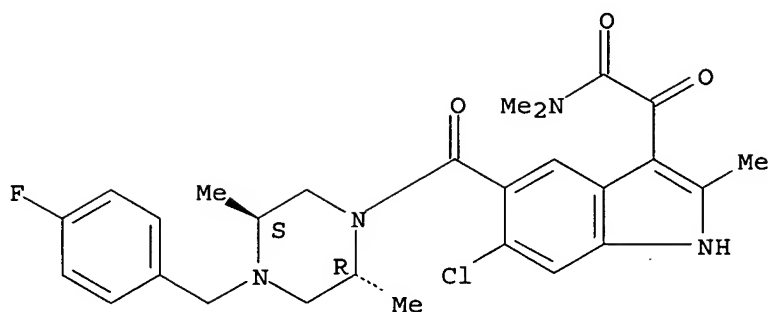


RN 309915-01-3 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,2-trimethyl-α-oxo-, rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

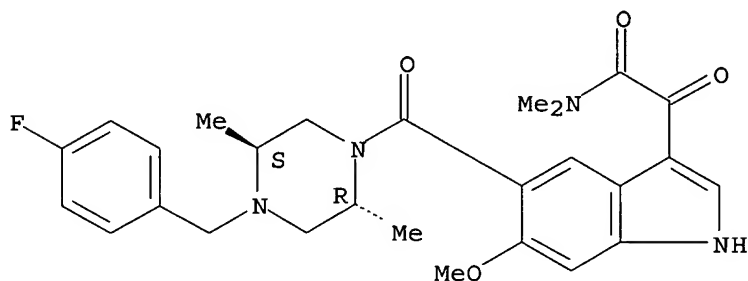




RN 309915-02-4 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo-, rel- (9CI)  
(CA INDEX NAME)

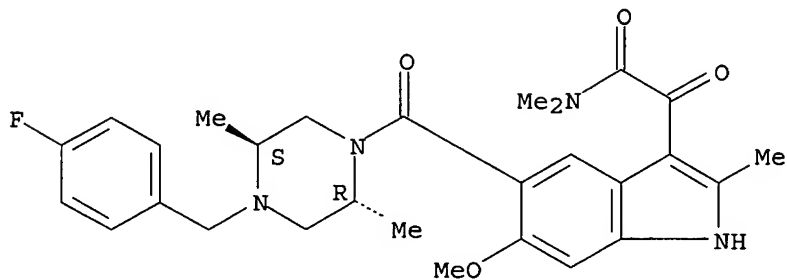
Relative stereochemistry.



RN 309915-04-6 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-6-methoxy-N,N,2-trimethyl- $\alpha$ -oxo-, rel- (9CI)  
(CA INDEX NAME)

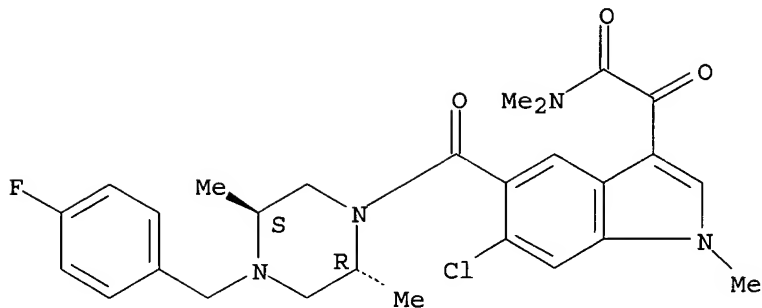
Relative stereochemistry.



RN 309915-12-6 CAPLUS

CN 1H-Indole-3-acetamide, 6-chloro-5-[[[(2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl- $\alpha$ -oxo-, hydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

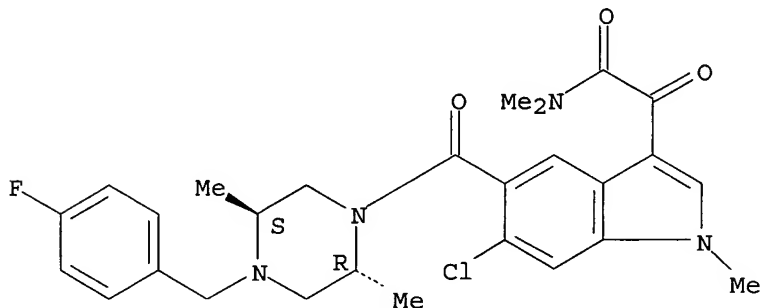


●<sub>x</sub> HCl

RN 309915-13-7 CAPLUS

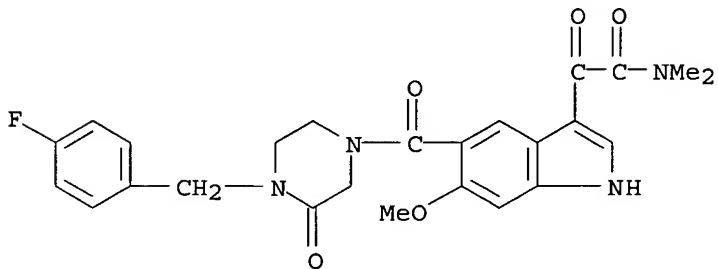
CN 1H-Indole-3-acetamide, 6-chloro-5-[[ (2R,5S)-4-[(4-fluorophenyl)methyl]-2,5-dimethyl-1-piperazinyl]carbonyl]-N,N,1-trimethyl- $\alpha$ -oxo-, rel- (9CI)  
(CA INDEX NAME)

Relative stereochemistry.



RN 309915-14-8 CAPLUS

CN 1H-Indole-3-acetamide, 5-[[4-[(4-fluorophenyl)methyl]-3-oxo-1-piperazinyl]carbonyl]-6-methoxy-N,N-dimethyl- $\alpha$ -oxo- (9CI) (CA INDEX NAME)



REFERENCE COUNT:

3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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